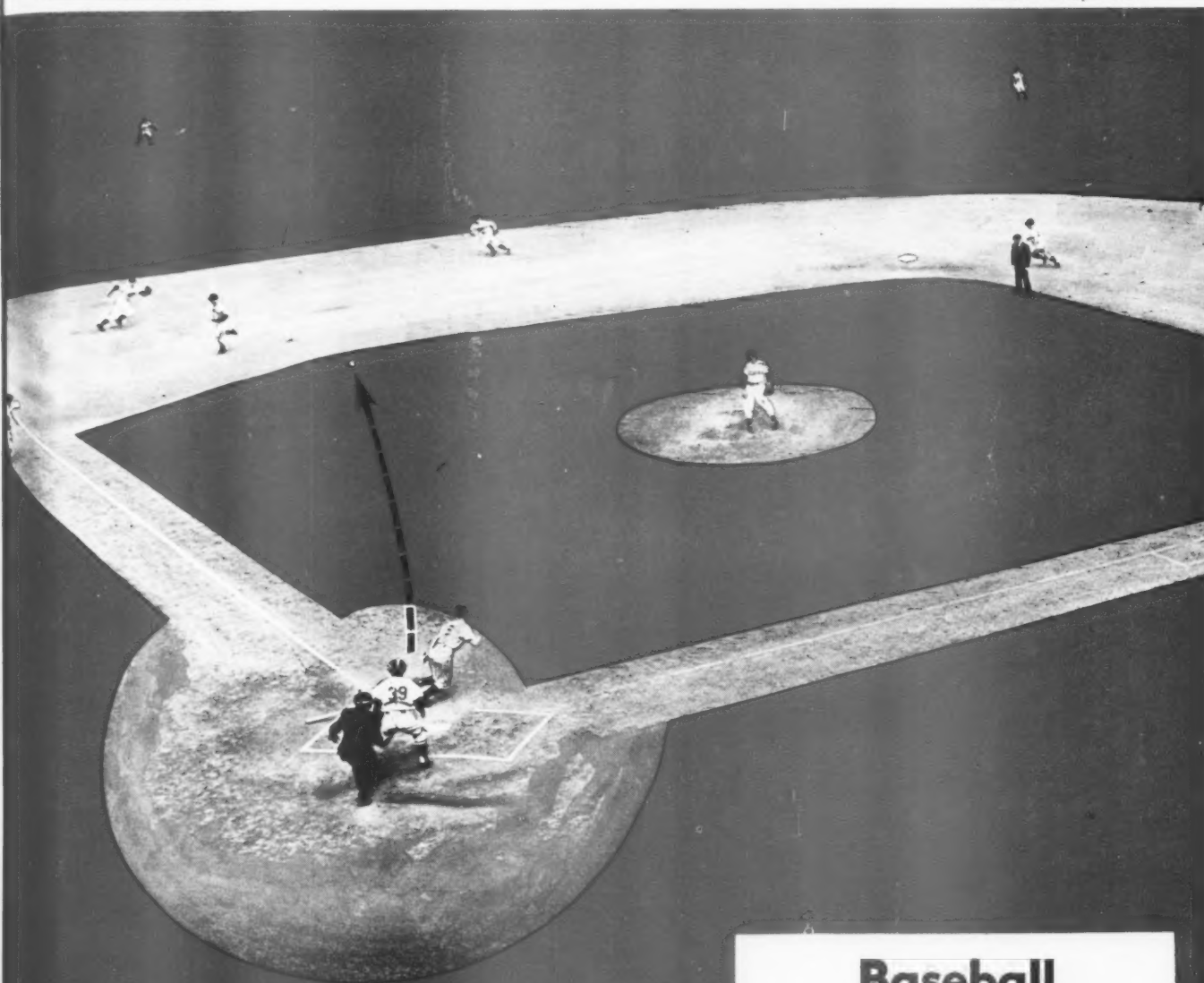


ATHLETIC JOURNAL

Vol. XXIX No. 6

February, 1949



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Nation-Wide Amateur Athletics

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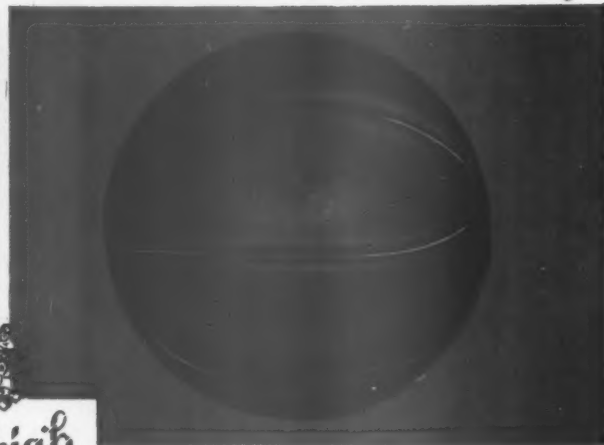
FRONT COVER ILLUSTRATION

Stan Rojek of the Pirates doubles to left to score
 three runs against the Dodgers in the game last August.
 The drive bounded off third baseman Tom Brown's
 glove, past shortstop Peeewe Reese and into left
 field where it was taken by Arky Vaughan. Scoring
 are Frank Gustine from third; Ed Fitzgerald from
 second and Ed Bockman from first. Pirates won, 6-3.

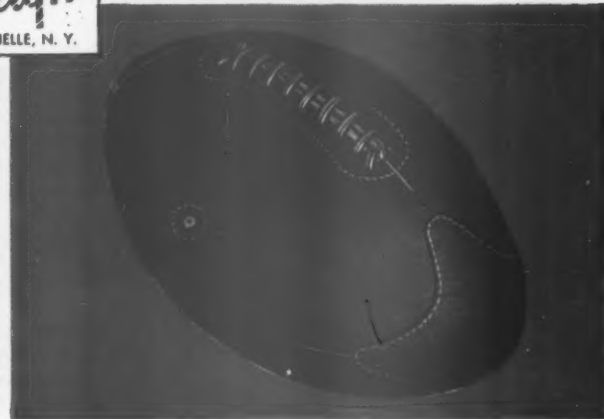
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QUITE FREQUENTLY coaches are confronted with methods of increasing attendance at various games. Coaches Tom Talley and James Little of Ganado, Texas, High School used the following letter to stir up the townspeople to support their team. "Every day I get a letter from a coach, a college, a newspaper, or a fan, asking about the college talent on the Ganado High School football team, about a certain all-some-kind-of-team, about the new three-man-under offense we have used lately to keep our offense from bogging down (and so far it is marvelous), or about the new shifting defense we have used of late that seems to stop our opponents when we want them stopped. We have decided to invite all of you to see these all for yourself, played by a hard fighting group of boys that play the game with all they have. The Ganado High School team plays Runge High School at Runge, Texas, 8:00 P.M., Friday, November 19, their last game. We think that we have a couple or so of the best players that you can find in Class "B" schools. Sure, we had a slow start since we lost eight starters and three top substitutes last year and the new boys had to learn against Class "A" school teams. They are rolling now: Needville 0, Ganado 46; Goliad 7, Ganado 39; Yorktown 12, Ganado 25, after we played the subs the first quarter and spotted them 7 points. If you would like to find out something about them — or any man on the team, come yourself or send someone to see them."

• • •

IDAHO has come up with a ruling regarding the use of pitchers in their baseball tournaments which bears mention as other states may be confronted with a similar problem. "No pitcher may, after a full game (seven innings unless tied) of pitching, pitch without a full day of rest. If he pitches two consecutive days, or in two games the same day, he must have a day of rest and not pitch more than seven innings in the two consecutive days or in the two games the same day, unless he is the pitcher

at the end of the 7th inning in a tie game, in which event he may finish the game." . . . When C.C.N.Y. started this season's basketball schedule, Nat Holman started his 464th game as coach. During that span his teams have won 343 for a neat .782 percentage. . . . The newly-formed Yankee Conference, comprising the Universities of Maine, Vermont, New Hampshire, Massachusetts and Connecticut and Rhode Island State College will play for an old-fashioned bean pot to be awarded annually to the conference champion in football. . . . Since the Big Six (recently enlarged to the Big Seven) Conference was formed in 1929, Kansas has taken ten of the twenty possible basketball championships and tied for another. Iowa State has four championships to its credit. . . . In swimming the nod goes to Iowa State who has taken nine championships and tied for two others. Nebraska has taken the other three and tied twice with Iowa State for the sixteen possible championships, no meets being held during the war years. Iowa State has never finished below second in conference swimming meets, a record if we ever saw one.

• • •

ROBERT DUNNING, a member of last year's Northwestern baseball team, is now coaching at Central School in Bolivar, New York. . . . Bill Jurgens, one of baseball's all-time greats, is the newest addition to the baseball promotion staff of A. G. Spalding & Brothers. . . . Buch Buchanan, who has been Johnny Vaught's number one defensive quarterback at Ole Miss grabbed a blocked punt in the Tulane game. As he passed the Mississippi bench he yelled, "Hey coach! Send in Buddy, (Bowen, offensive quarterback) I'm the defensive quarterback." . . . Idaho has limited to twenty the number of pre-district games any player of its member schools may compete in. A quarter of a game being considered a full game. . . . New Jersey has abolished interscholastic boxing among its member schools. . . .

(Continued on page 61)

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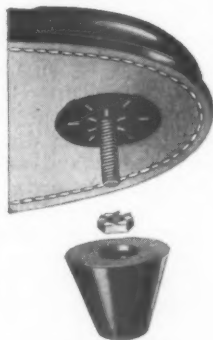
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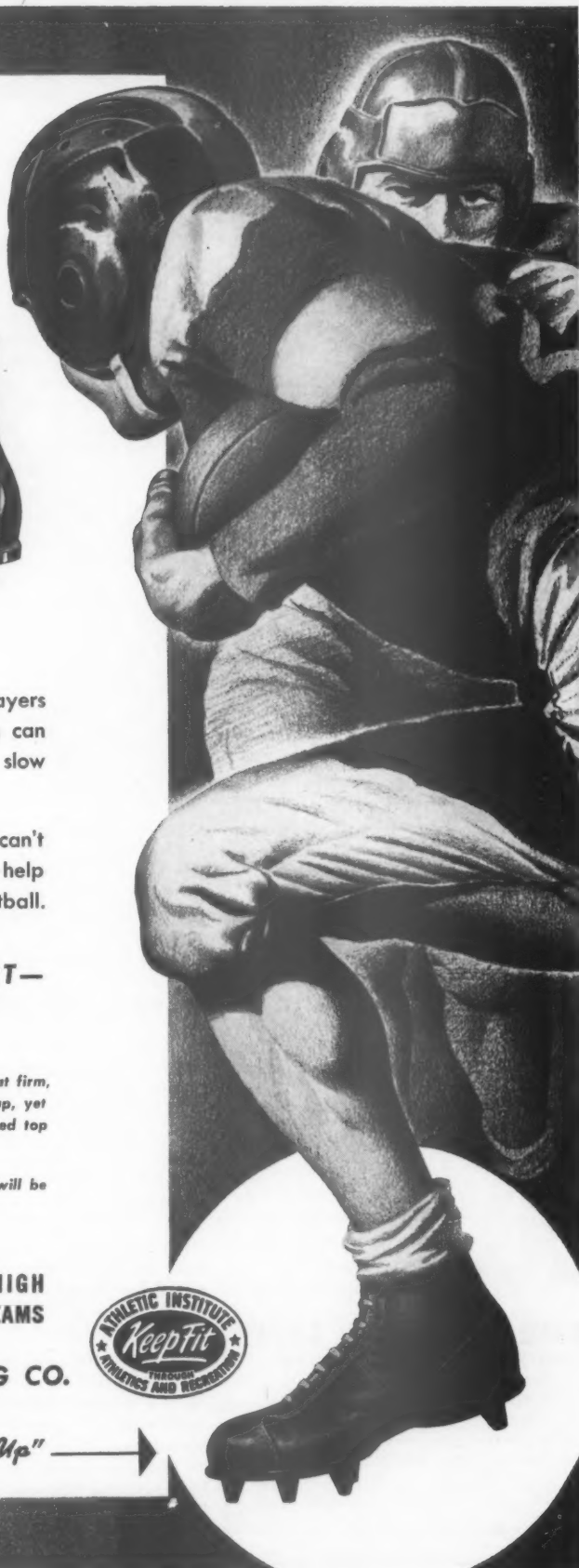
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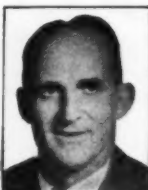
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Conditioning for Baseball

By JACK HEPPINSTALL

Head Trainer, Michigan State College

ALL BRANCHES of competitive sports need a certain amount of time to get the candidates into condition and as the baseball season is usually a long one the condition of the team often means the difference between a good and poor season. All team candidates should have a physical examination before being issued any equipment or being allowed to participate in any practice or game. Any defects should be noted and special work and exercises should be given to help correct them. Pre-seasonal training is as essential in baseball as in any other sport, and the team candidates who start to get themselves into condition a few weeks before the regular practice begins will, no doubt, be in better condition during the playing season.

Many promising young baseball players are failures because they do not get into condition both physically and mentally. The condition of the players affects their ability to play, their mental attitude, determination and their team work. Condition affects younger ball players more than older ones as younger players can get into condition quicker and also get out of condition quicker. While the older players need more time to get into condition, they have learned through experience how to keep in condition. Handball is a very good pre-seasonal conditioner which keeps the arms, legs and body in good physical condition and develops good co-ordination. The use of Indian clubs is another excellent conditioner. The swinging of Indian clubs is very good for loosening up shoulder, elbow and wrist joints as well as for developing the arm and shoulder muscles without injuring them. They should be used for a few minutes before each practice during early training. Pepper games before each practice are also good provided they are taken easily at the start and increased in speed as the training season goes along.

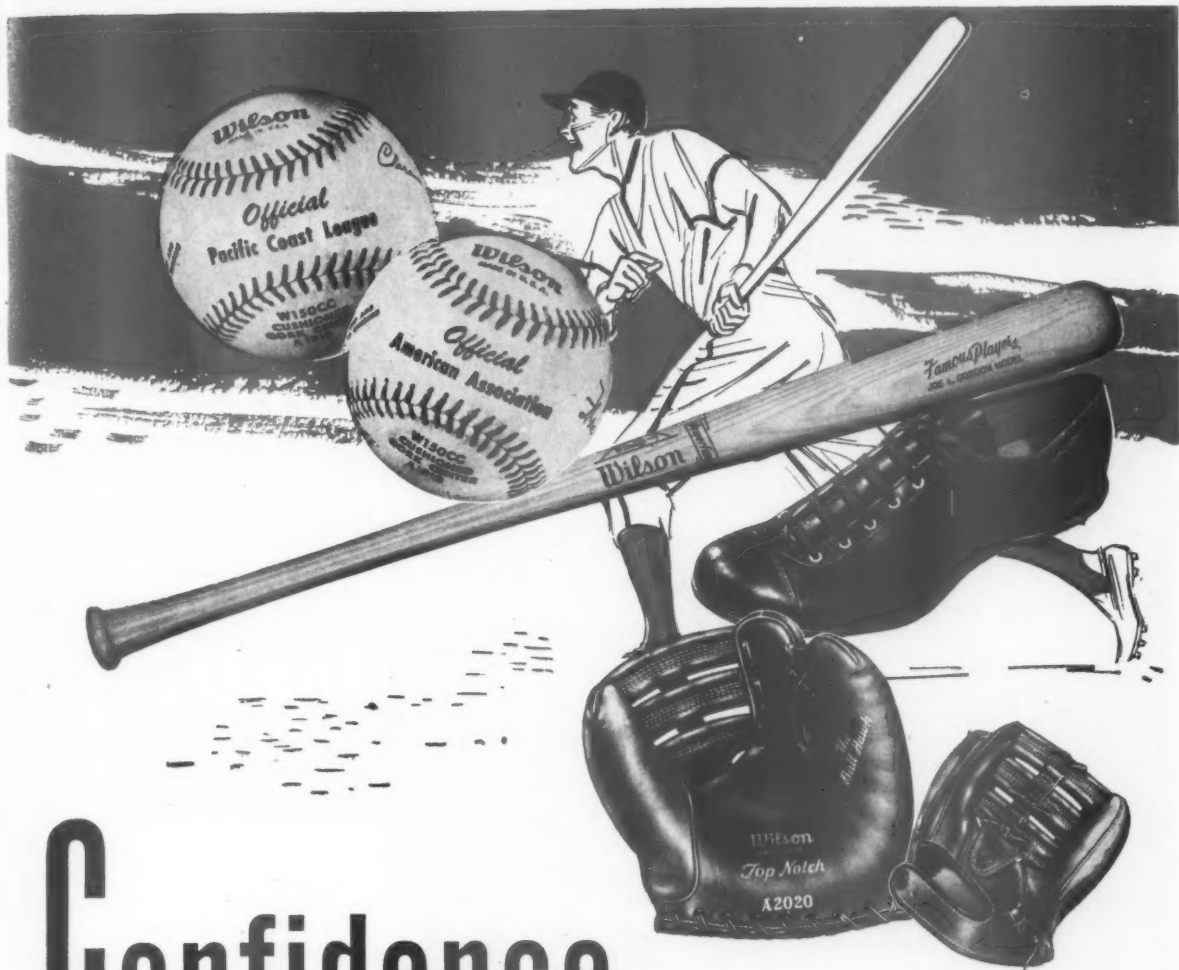
The first week or ten days should be spent in getting the whole body into condition. Numerous calisthenics bring all the muscles of the body into play — especially the legs and

arms. Lots of walking and jogging should be done to build up the legs for quick starting and stopping. A good policy to follow at the start of each practice is to give all the team candidates 10 to 15 minutes of calisthenics: some jogging and walking around the field or building, and then some running. Quick starts should be practiced between the walking. Well-developed legs for quick stopping and starting are "musts" in baseball. Road work or running at a steady, easy pace is the foundation for a strong, healthy physical condition and the average player neglects this type of work. Our average, present-day athlete does not get enough walking or running during the off-season. The habit of riding instead of walking has a tendency to develop "automobile legs" instead of good strong healthy legs.

The majority of young baseball players do not realize the importance of taking proper care of their throwing arm. They try to impress the coaches the first few days they are out for the team by throwing too hard. In other words, they try to make the team right at the start instead of taking things gradually. This is a big mistake because an arm that gets sore and lame through overwork at the start of the season takes a lot of time and work to get back into working condition again. Many good young players have ruined their chances of making the team by throwing too hard at the start and many pitchers have ruined their arms by starting to throw curve balls before their arms were in good condition. A good rule to follow is to warm up by throwing the ball with an easy, overhand motion for a short distance;

(Continued on page 57)

JACK HEPPINSTALL came to this country from England in 1913 and joined the department of physical education at Michigan State where he has been ever since. He was president of the National Athletic Trainers Association in 1939 and helped condition the United States Olympic team last summer.



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VOIT

NEW YORK 10, CHICAGO 6, LOS ANGELES 11

America's Finest Athletic Equipment

MANY of those who read this article will be familiar with its ideas, but if it reaffirms their convictions or acts as a review of some points and helps them to face the new season baseball-minded it will be worth while. Some coaches feel that if they get one or two ideas from reading a whole book the time is well spent. Books and magazines help to refresh the coaches' minds as the new season approaches.

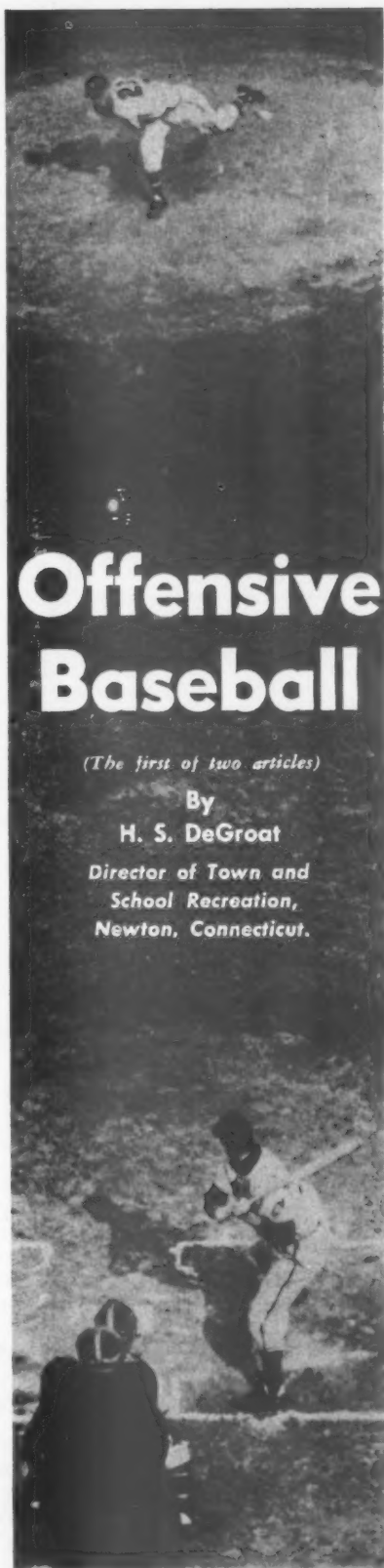
Batting and baserunning are those skills of our national game that appeal most to those who know least about inside baseball. The long-hit ball that goes over the fence or the hard drive through the openings between infielders and outfielders that gives the extra bases appeals to everyone. There is appreciation for fine fielding and an extraordinary pick-up of a batted ball but generally the defensive part of baseball is not so appealing. Scientifically, if the defense and offense were to click perfectly every game would end in a tie. It is the superb ability of one or more players on a team in either batting, running the bases, pitching or fielding plus some unusual situation or obstacle in any game that throws off the balance of defense and offense.

To be more definite, I can recall games in which the ace pitcher of one team holds the other team practically hitless. How is such an ace beaten? It may be by any one of the following: An unusual kind of hit, such as a single going to an outfielder that happens to hit a rough spot and bounce over the fielder's head or to one side as he prepared to take it on the first bounce. A screwball hit that bounces off the handle of the bat and goes for an infield hit or just drops over the infield with the winning run on third. A crafty batter may come up at the right time in the game and work the pitcher for a walk, or perhaps he decides to swing at the expected cripple after working the pitcher into the "hole".

The difference between victory and defeat is often decided by which team is worrying. This is especially true in amateur ball. Worry and tenseness go together and are handicaps. How many times has the overconfident team suddenly become tense through worrying and lost the game by a narrow margin when the other weaker team managed to get an early lead?

Baseball Books

There are some fine books written by competent teachers on the theory



This is a study of a pitcher and batter in action in the second World Series game between Boston and Cleveland last year.

Offensive Baseball

(The first of two articles)

By

H. S. DeGroat

Director of Town and
School Recreation,
Newton, Connecticut.

of baseball. Dr. Elmer Berry's *Baseball Notes for Players and Coaches* published in 1916 and Byrd Douglas' *The Science of Baseball* published in 1922, are two that are now out of print but were written from the teaching angle. Jack Coombs has added to these with his book *Baseball** and has added some new features not covered by the others.

In this discussion of offensive baseball the writer will quote from Douglas' book which he has used as a text as well as from Berry's book. References also will be made to the *Baseball Coaching Kit* which differs from the other books in that it consists of twenty-one separate booklets plus a "coach's Notebook".

The Traits of A Dependable Hitter

One third of all baseball is batting and usually over half of the practice sessions are turned over to this part of the game. The ability to bat against top pitching cannot be developed in one short season of wielding the big stick. It takes many seasons to acquire the poise that a reliable batter must have. He must be able to shift the worry from his shoulders to the pitcher's and defensive players. He must be expert at handling his bat and should not have to spend his time thinking whether his swing is level, his stride right, etc. He must be able to size up the pitcher and the situation facing him even before he comes up to bat.

In baseball every player must be able to think at least one play ahead. The dependable hitter does this before he steps into the box. Byrd Douglas states that the reliable batter may not always be the best hitter, but he can be depended upon to react and meet the occasion quickly in each game. He can size up the situation facing his team. He can give and receive signals with equal ease. He knows how to work the pitcher into the "hole" or perhaps for the ball that he likes. He remains cool and confident that he can produce as planned.

The dependable batter is well-versed in batting strategy. He chooses a balanced bat that he can swing on a level plane from his hips up to his shoulder level or with which he can golf the lower pitches. He knows that by shifting his hands slightly on the handle he can raise or lower the outer or hitting end of his bat to get the solid hit. If he is hitting fly balls, he will shift his grip out to raise the heavy end. Conversely, if he is topping the ball

*Prentice-Hall Incorporated, New York

he will move his hands to a longer grip.

The dependable batter can diagnose the pitcher. This means he knows the pitcher's favorite pitch and thus has an advantage over that pitcher. He can work the pitcher into the "hole" or into delivering his (the batter's) "groove ball", the ball he can hit the best. Any batter that can take one or two strikes waiting for the ball he likes best to come up, has the makings of a dependable hitter.

In order to work the pitcher the batter must take different positions in the batting box. If he takes the same position every time he will give the pitcher an advantage, however, the pitcher will not have an advantage if the batter assumes more than one position in the batter's box which he should vary according to the count on him and the situation existing on the field.

If the pitcher likes to "dust off" the batter who hugs the plate, what is there to prevent the batter from adjusting his feet so that as he takes his stride he can connect with that "dust off" pitch? Crowding the plate is also one of the methods used to work the pitcher into the "hole". Douglas defines the "hole" as being the count of two balls and one strike, one ball and no strikes. "I do not say the pitcher is in the 'hole' when the count is three balls and no strikes for then the pitcher is facing a catastrophe, not a mere 'hole'." The reliable hitter is calm as he steps into the box. If the situation changes after he is in there, he steps out and changes his plans. He knows that he should signal to hit any ball *only* if there is a *real reason*. Some players repeatedly hit the first pitch. In big time ball the tail-enders often do this.

Many coaches like to order the first ball hit if they find that the opposing pitcher has been putting it in there consistently. This is especially true if a dependable batter is up and runners are on. In college and high school baseball the anxious batter who hits the first pitch with a runner on first and no one out seems to hit into the killing double-play more than fifty percent of the time. It is a mistake for the batter to swing at the first pitch if the opposition is wise to his style.

The dependable batter must have confidence. This means the batter must be determined to get the most for his money; he must not be satisfied with a single when a triple or double might be made. If he is hitting straight-away he must forget

all else. If he is up for a hit-and-run or some other offensive play he must overcome any timidity. He should feel that the play is going through. He must realize that the honors go only to those who have courage. Here, courage to think success is more than half the battle.

Traits of A Good Batter

Pat Crawford, former player for the St. Louis Cardinals, lists the following qualifications of a good batter in the order of their importance^{**}: 1. Ability to pick good balls. 2. Co-ordination or timing. 3. Ability to follow the pitch. 4. Healthy eyes. 5. Muscular strength. 6. Relaxation, poise. 7. Follow-through. 8. Stance, form. 9. Stride. 10. Large hands.

A player should strive to be a dependable hitter rather than to see how far he can hit practice pitching. He should control his bat during batting practice. The following are some batting tips: hit only good balls; hit them right back where they come from, on a line; know how to balance your bat; know your groove ball; learn to pour out the power of your bat as you pour tea from a small pot — without spilling it all over everything; know how and when to swing a choked bat; know how to bunt without flinching; catch the ball with your bat; the best-hit balls are due to good timing, not terrific swings; read about baseball; show poise in the box; develop ability to think under pressure which will make the pitcher do the worrying instead of yourself; this means

^{**}Baseball Coaching Kit — Practice Session
Batting Dope

hard work and self-control in practice periods; pay attention to your coach; continuous horseplay never made a good ball-player. Continuous attention to business in practice results in the best kind of horseplay — in the locker-room after winning a close game.

Douglas states that even though good batters are born, the .250 batter can be coached to be a .280 hitter and a .300 hitter can reach .350. This .300 hitter may be the poorest batter if he does not continuously improve on other qualities. A dependable hitter with men on base is one who: 1. hits safely 2. sacrifices successfully 3. draws a walk 4. gets on base due to an error (hitting into an error) 5. hits a fly ball that drives in a run 6. is hit by the pitcher.

Data from several seasons showed that .300 hitters were usually successful fifty per cent of the time or even better when runners were on base. The following chart shows that the most dependable batter was successful 21 times and failed 15 times while batting .291 for the season. This supports Douglas' statement that the man with the highest batting average is not always the reliable batter. Here Huston, who has since played with the Athletics and Boston, led the list as most dependable hitter, as high scorer, as high base-stealer, and as high walk-getter.

Douglas stresses the need for the batter to diagnose the pitcher. Does he have a different arm action for his curve? for his fast ball? etc. Is he likely to be upset by a bunt in

(Continued on page 51)

DEPENDABILITY OF HITTERS

Table No. 1

No. in Line-up	Player	Times		Ave.	Hits	Accomplished			
		Successful	Failed			Walks	H.E.	H.P.	S.H.
3	Huston	21 out of 36	15	.583	9	8	3	1	0
4	Cella	22 out of 38	16	.579	19	2	1	0	0
5	Allen	22 out of 43	21	.511	13	1	7	1	0
9	Davis	7 out of 14	7	.500	6	1	0	0	0
2	Nuttall	17 out of 37	20	.460	8	2	3	1	3

H.E.—hit into an error

H.P.—hit by pitcher

S.H.—Sacrifice

RUNS SCORED, RUNS BATTED IN, ETC.

	Innings Played	Batting Average	Runs Scored	RBI	Struck Out
3	Huston	.291	19	9	3
4	Cella	.458	14	19	5
5	Allen	.328	14	24	7
9	Davis	.428	3	4	1
2	Nuttall	.277	14	5	9
1	Smith	.242	9	12	12

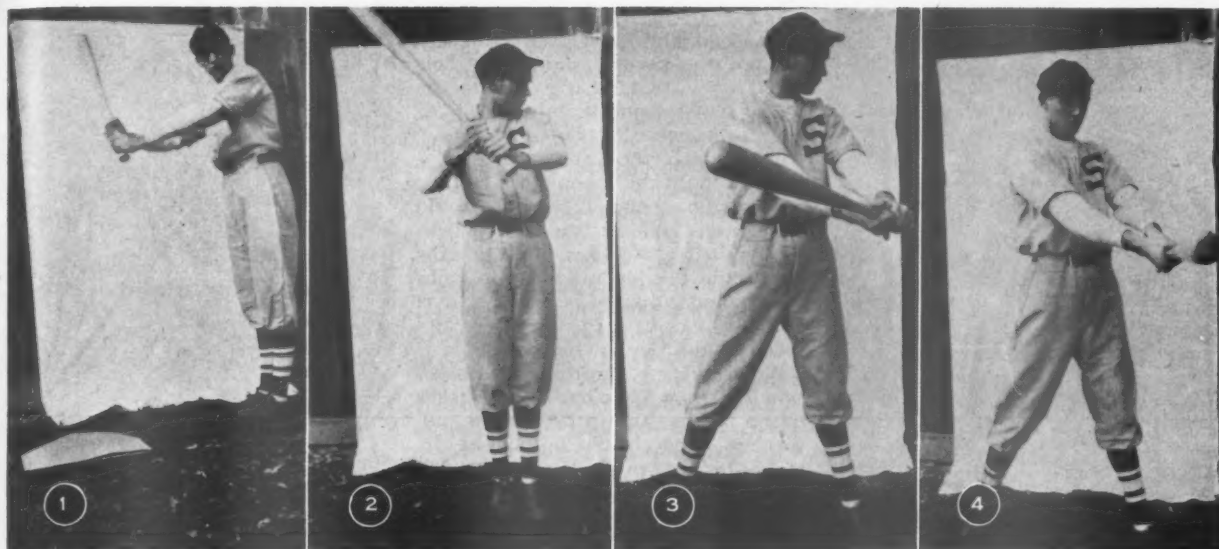


Illustration 1. Front view of batter ready to hit. He stands two feet from the plate with his eyes on the ball, his arms extended and the bat off his shoulder. Illustration 2. Side view of batter ready to hit. This is the position the batter takes as the pitcher starts his motion; his feet are together and he grips the bat firmly. Illustration 3. As the ball approaches the strike zone the batter steps into the pitch and swings in a short flat arc. Illustration 4. At the instant of impact the batter transfers his weight to his forward foot and straightens his wrist.

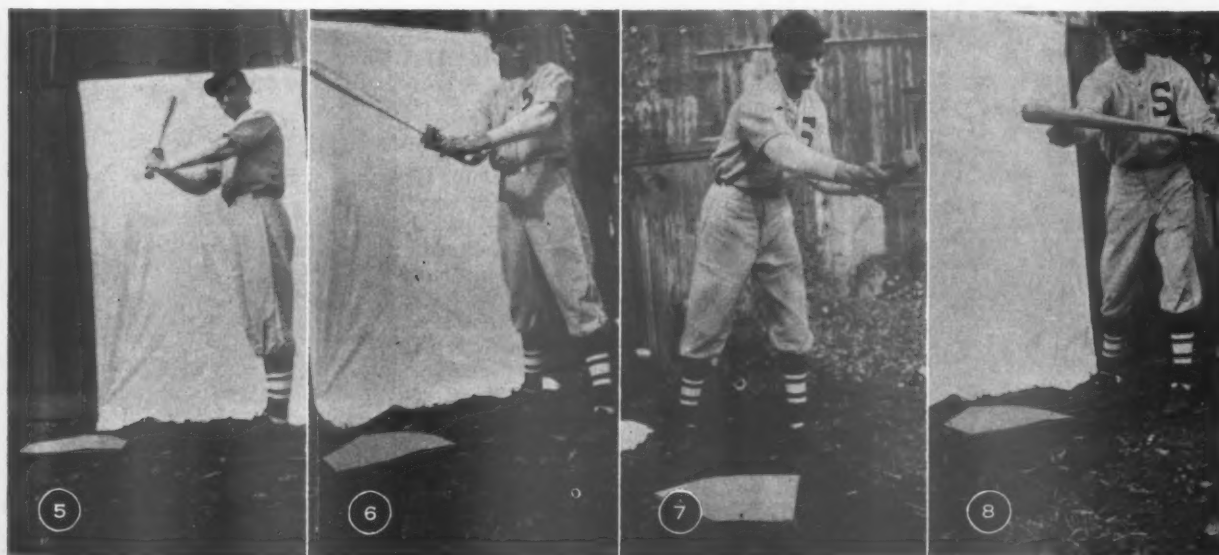
IN MOST sports the scientific approach is recognized, but in hitting a baseball, superstition reigns. For many players, precautions such as wearing a certain garment, not stepping on a base line, or using a particular bat still appear to be the important factors in attaining batting efficiency. Proper batting technique is so rare that a hitter using a closed stance and a wrist snap is a curiosity.

This is strange when we consider how much emphasis is placed on correct technique in hitting a golf ball, which is a stationary target. In hitting a baseball, which is a moving target, the correct technique should be even more important, for the baseball comes at the hitter on different levels, from different angles, at different speeds, and with different

Hits Instead of Outs

By CORNELIUS TILGHMAN

Illustration 5. Batter ready to bunt has same stance as for hitting. Yardstick on ground in front of batter indicates how far from the plate he is standing. Illustration 6. At the start of the bunt the technique is still the same as for hitting. The batter steps into the pitch and brings his forearms forward. Illustration 7. Instead of swinging, the bunter slides his upper hand toward the heavy end of the bat and, with loose wrists, allows the ball to bounce off the bat. Illustration 8. Front view of correct bunting technique. Note that the arms are extended well in front of the body and that the bat is not over the plate but nearly two feet in front of it.





spins — all of which are calculated to mislead him. Moreover, most hitters are over-anxious, stand with their feet far apart, stand too close to the plate, swing from the shoulders, or follow-through off balance.

And when the average player is told to bunt he is apt to employ an equally inefficient method. He "telegraphs" his intentions to the defensive team, "chokes up" on the bat, stabs at the ball with tight wrists, and apparently has no idea of how to control the direction and speed of the bunted baseball.

No wonder — according to professional batting averages — the pitcher has a better than three-to-one advantage over the batter before he makes his first pitch. Despite all this, there is nothing mysterious about proper hitting technique. It is simple, reasonable, and effective. It is easier to learn than how to hit a golf ball correctly. For convenience in teaching, correct hitting technique may be divided into four parts: (1)

CORNELIUS TILGHMAN played high school and semi-pro baseball before taking up coaching. He has coached both baseball and soccer while teaching academic subjects in college. The Athletic Journal will feature another article by Mr. Tilghman in a spring issue.

Poise, (2) Stance, (3) Timing, and (4) Cut.

(1) **POISE** is a combination of confidence and judgment. It is a mental attitude in a player that can be cultivated by intelligent coaching. A batter with poise is not afraid of a fast ball or a curve; he is not over-anxious to "murder" every pitch. He puts the burden on the pitcher by not going after bad pitches and knows that a pitch above his armpits is more likely to be called a ball than a strike. He makes the pitcher work by waiting for a "fat" pitch.

Poise means confidence in one's ability to hit a good pitch safely. It means the refusal to swing at any pitch not in the strike zone, as a walk is often as valuable as a single. Poise means the ability to wait out a pitcher without tightening up.

One of the best ways to teach a batter poise is to show him how effective it is — (particularly against



JIM HEGAN

CONNECTS WITH ONE

From the "1948" World Series" Film

fast-ball pitching) — to meet the ball with the center of the fat part of the bat. Learning to hit line drives through and over the infield with the least amount of swing or effort builds up the batter's confidence and keeps him from tightening up.

In teaching batting, the coach should always explain exactly what he wants the hitter to do and how to do it. Practice without clearly established and explained objectives is inefficient. For example, hitting practice should be *practice in getting hits by using correct technique*; it should not be just a session during which batters, using incorrect techniques, try to slug easy pitching out of the lot. During a game the batters do not get easy pitching. Moreover, most long flies are not home runs but outs, therefore, practice in slugging high flies is practice in getting out. In working for poise, intelligent direction of hitting practice is of great importance.

Natural hitters are rare. A coach must develop the material that he has. Even Rogers Hornsby, generally rated as one of the most effective right-handed hitters of all time with a lifetime batting average of .396, had to develop and perfect his poise and timing. His first year in professional baseball he barely managed to hit above .200. (According to Hornsby, "It doesn't pay to be a first-ball hitter at all times; wait it out until you get one where you want it in the strike zone.")

Another point in developing poise in a batter is to teach him to direct his hit according to where the ball comes over the plate. If he is a right-handed hitter and the ball comes over the outside corner he should aim for right field. When the pitch is centered, teach the hitter to hit straight away, down the middle over second base, the spot where there is the most safe hitting space on a baseball field. When the pitch is on the inside corner to a right-handed batter, he should hit to left field.

The reason for this directional hitting is that it will result in more base hits and build up the hitter's poise. Trying to pull an outside pitch into the opposite field generally results in an easily fielded ball, for if it is fair, the ball remains in contact with the bat too long to be a sharp line-drive.

In building team spirit and teaching players confidence it helps a great deal if the coach himself has poise, treats his players as human beings, does not "bawl" them out unnecessarily, and has the patience to go over and over the correct procedure

until each of his players has mastered it.

(2) *STANCE* is the position the batter takes in the batter's box. The correct stance is the one that makes it possible for the hitter to *retain his balance at all times and to get the most power with the least effort*. In taking the proper stance the batter should be far enough away from the plate so that the "fat" part of the bat is over the plate when he swings. He must make allowance for his arm-stretch. In most instances, therefore, the batter will stand from one to three feet away from the plate.

He should keep his elbows and arms away from his body and hold the bat in readiness, but away from his shoulder. He should grip the bat firmly but not so tightly as to spoil



Illustration 9. Rear view of bunter showing relaxed knees and back. Compare this with the straight back and tensed legs in Illustration 4.

the rhythm of his swing. He should be relaxed, comfortable, alert, and confident.

The closed stance is preferable. In other words, the batter should stand with his feet together, heels touching, well back in the batter's box so that he will have plenty of room in which to step forward as he swings. The closed stance allows a hitter to get his weight behind his swing and at the same time retain his balance. The batter should stand with his feet together and with his weight on the foot nearest the catcher. As he swings into the pitch he should slide the foot nearest the pitcher forward and transfer his weight to that foot. This shift of weight at the moment of impact puts the power of the batter's

entire body into his swing without loss of balance.

As the bat hits the ball, the hitter, with no loss of time or motion, should take a second step — this time toward first base — and be off at top speed. He should not look to see where the ball is going but should break for first base immediately as part of his follow-through and depend on the first-base coach to tell him if the hit is fair or foul, good for one base or more. Since eight out of ten runners are thrown out at first by *one step*, the technique that gets the runner off one step quicker is going to mean more scoring.

By using the closed stance with the weight on one foot, the hitter can avoid a close pitch by simply moving his forward foot back from the plate and leaning away. (A batter should be taught to keep his head up and his eyes on the ball; he should not be allowed to duck under a pitch for it may be a curve.) No matter what the contingency, the batter using the closed stance need never be off balance. He need never sprawl awkwardly in the dust after having swung and missed or have to flop dramatically to escape a bean ball. (Students of baseball will observe that it is the open-stance off-balance shoulder swingers who fuss and fume longest through a batting slump.)

(3) *TIMING* is the sense, or instinct, that tells the batter the exact instant at which to start his swing at the ball. This is probably the most difficult part of correct hitting technique to teach, but it can be taught. The first thing is to be sure that the player's eyesight is good. It is wise to have the players' eyes tested at least once each season. Aside from good eyesight, timing is mostly a matter of practice, conscious and intelligent practice.

When the pitcher is ready to throw, the batter must watch the ball from the instant it leaves the pitcher's hand until the instant his bat makes contact with it. He must never take his eyes off the ball coming toward him.

The average fast ball takes .5 of a second to travel from the pitcher to the plate. This leaves no time to waggle the bat back and forth once the ball has been thrown. The batter must be ready to start his swing at exactly the right instant.

A half a second may not seem to be much time in which to judge the speed of the ball and the spot where it will cross the plate, but actually, to the trained hitter, it is plenty of time. One of our large universities

(Continued on page 54)

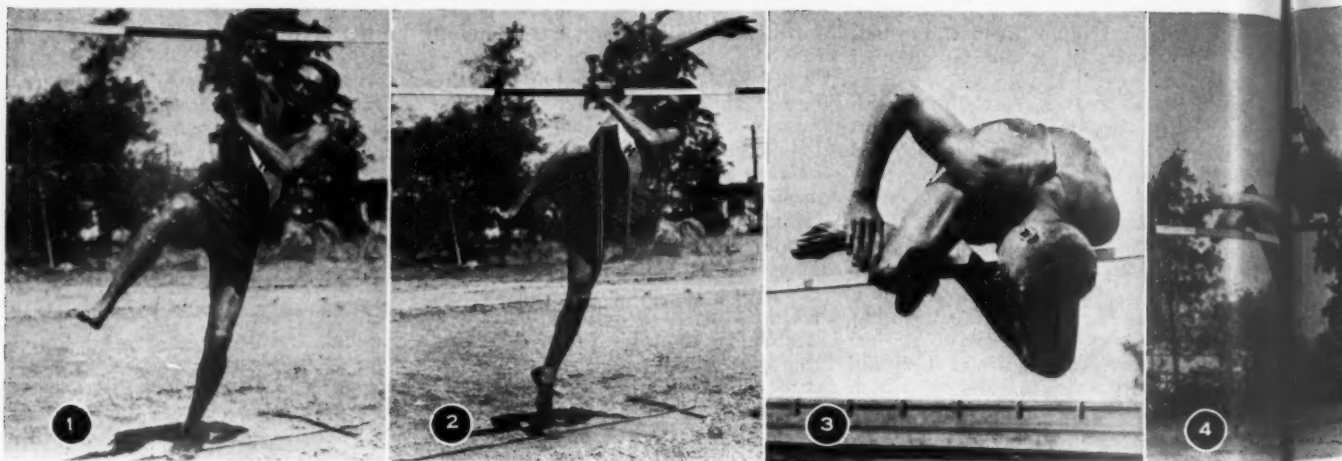


Illustration 1. The left foot has been stomped down hard. The right leg is starting up. Note that both arms are also being raised with the leg. Illustration 2. The left foot is just leaving the ground. The right leg has been lifted higher. The right arm has been thrust sharply upward. The left arm is just beginning to come down to close contact with the chest. Illustration 3. This picture shows a front view at the instant the bar is cleared. Note how low the head is held and that the left arm is close to the

Training for the High Jump

By RALEIGH HOLT

Track and Cross Country Coach, Hoover Senior High School, San Diego, California

THIS IS an account of how a national high school champion was conditioned in the high jump. This honor was bestowed upon Jack Razzetto, who was a student at Herbert Hoover High School, San Diego, California.

Razzetto's best jump during the 1948 season was 6' 5 $\frac{1}{4}$ ". He was unusually consistent. He was never under 6' in thirteen consecutive meets during the season. His average jump was 6' 3".

Conditioning high school track and field athletes in California requires very carefully planned schedules. This is important because of the unusually long season. Most high school coaches in this state supervise cross country and fall track for those boys not participating in other sports. Here at Hoover High School we spend the fall months teaching the fundamentals of the field events in addition to attending to our cross-country team duties. This is a senior high school and as a result we do not get the junior high school boys until they reach the tenth grade. We hold a meeting of all sophomore boys during the first month of school. We try to interest them in some type of athletics.

Jack Razzetto came to us in the fall of 1945. At that time he was only 5' 8" in height. He reported for fall track and indicated an interest in the high jump. This seemed unusual at the time because of his lack

of height. He was sent to the high jump pit and it was soon apparent that he had an unusual amount of natural spring. He was taught the fundamentals of the Western roll form of jumping from his left foot. Because of his short stature it was decided to teach him the stomach roll instead of the side roll.

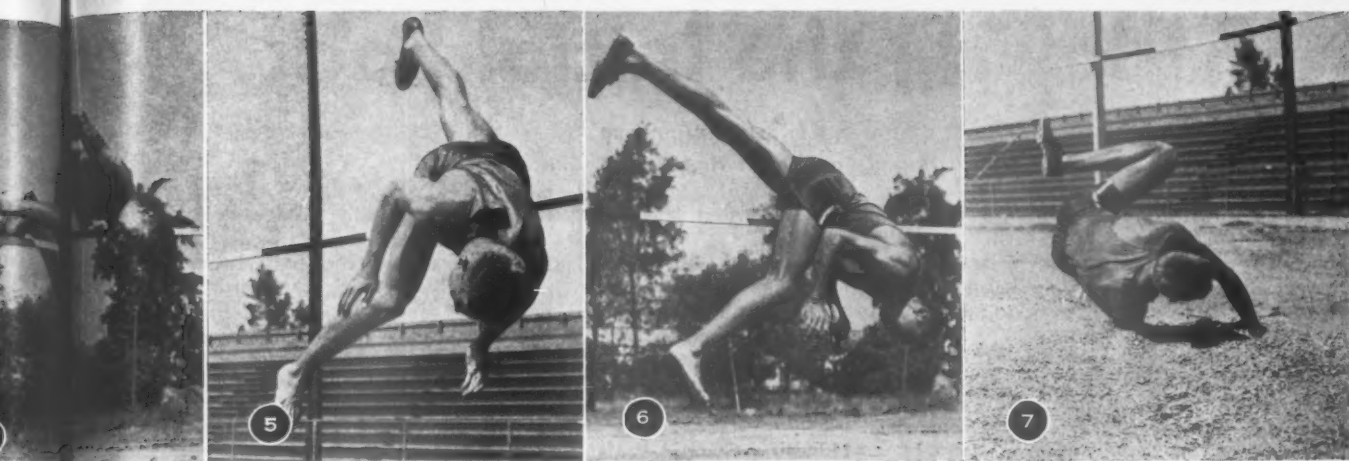
Spring practice in California usually starts about the middle of January. The first thing we teach our high jumpers is how to find their take-off spot for the Western roll. This is done by having the jumper face the bar and extend his arm until his fingers touch the bar. The place where the jumper is standing is the correct take-off spot.

The next fundamental we teach is the length of the run. Most jumpers run too fast and too far. We have experimented on this a lot. As a result we suggest a run of six strides. The jumper should be relaxed at all times during the run and the jump. He should approach the bar slowly. Razzetto used a slow run of only 26 feet. We started him out during his first year with a run of 29 feet. He seemed to pick up the details of the stomach roll during his junior year when he reached a height of 6'2". As a senior he had grown to a height of 5'10" which is quite short for jumpers who attain heights greater than six feet. Every contestant he competed against was several inches taller. That is why he found the

stomach roll of greater assistance as it enabled him to gain at least two inches more than if he had used the side roll. It is hard to master because of the timing of the leg kick in crossing over the bar, but persistence and hard work will pay dividends.

As soon as the jumper learns the proper take-off spot and the run that suits his individual needs, the arm and leg action should be taken up. We insist that the boy kick high with the lead leg, which is the right one for a left-footed jumper. This must be a snappy kick. Simultaneously with the kick, the jumper must thrust his arms upward sharply. This will help the jumper to get off the ground. This is one of the hardest fundamentals to get across and is one of the most important fundamentals in high jumping. The kick of the right leg takes the body up and also turns it to the left. The kick must be sharp in order to insure a rapid turn so the stomach will be next to the bar at the top of the jump.

The next fundamental we work on is the position of the head and shoulders at the instant of bar clearance. The jumper must keep his head down when clearing the bar. This is another fundamental that is hard to learn. The coach, or a team mate, can help a lot by watching closely and warning the jumper as he will tend to hold his head too high in most cases. The head will



chest. Illustration 4. The body is now on top of the bar. Note how low the head is. The left arm is now tucked next to the chest. The stomach is directly over the bar. The legs are doubled up and straddling the bar just before the kick of the leg. Illustration 5. This is a front view of the body just after the bar has been cleared. It gives some idea of how high the leg has been kicked. Illustration 6. The jumper has cleared the bar. Note the locked knee of the left leg caused by the sharp kick of the leg when it was straightened. Illustration 7. The landing has been made on the right leg and arm.

usually precede the legs over the bar. The right leg will go over the bar ahead of the left.

The next consideration is the leg kick on top of the bar. Most jumpers have both legs doubled up when clearing the bar, with the legs straddling the bar. At this point the kick of the left leg should be stressed. This leg must be straightened out sharply, the knee locked and the foot raised high in the air so the bar will not be knocked off. This kick is most important. The timing must be just right in order to facilitate bar clearance.

The last fundamental we usually stress is the action of the left arm at the top of the jump. This arm is usually held close to the body when clearing the bar so the bar will not be touched. The athlete completes his jump by landing on his right leg and arm.

The six fundamentals mentioned above should be taken up one at a time with high school boys. We usually spend a week on each step. During that week we will stand by the bar and keep stressing the one fundamental we are working on for that week.

Training Schedule

The following schedule was prepared for Jack Razzetto during the spring of 1948. We use a similar program for most of our high jumpers. It was followed in its entirety throughout the season. The training period began January 12.

First three weeks: All members of the squad follow the same plan regardless of their specialty.

MONDAY: Jog and walk 440 yards. Five minutes of track calisthenics. Jog 330 yards.

TUESDAY: Jog 220 yards. Calisthenics. Stride an easy 100 yards on a white line, learning to toe straight ahead, three times. Take three standing broad jumps. Jog 440 yards.

WEDNESDAY: Jog and walk 440 yards. Calisthenics. Stride 100 yards at a good speed on the white line. Jog 440 yards.

THURSDAY: Take two easy 150-yard runs on the white line with a rest between. Calisthenics. Walk and jog 880 yards.

FRIDAY: Jog and walk 440 yards. Calisthenics. Stride 200 yards easy. Rest five minutes. Run 100 yards at good speed. Jog 440 yards. Motion pictures usually are shown at this time. On Friday at the end of the third week it is a good plan to schedule a time trial for all members of the squad. This should be a reduced distance for all races of 440 yards and up. For instance the 440 runners take 330 yards.

Second three weeks: The squad is divided into groups at this time.

MONDAY: Warm-up with 30 yards each of jogging, walking and striding for 440 yards. Calisthenics. Stride 150 yards fast on the white line.

RALEIGH HOLT earned three letters in football and four in track at Coe College. He has coached at Fruita, Colorado; Grand Junction, Colorado; Trinidad, Colorado; and El Centro, California. At present he is director of athletics as well as track and cross country coach at Hoover.

Jump about ten times at an easy height working on form. Stress the proper take-off spot and arm and leg action on leaving the ground. Jog 440.

TUESDAY: Jog 440. Calisthenics. Take 25-yard starts with sprinters. Take at least ten jumps at a height that requires about 75% of effort. Stress the same fundamentals as on Monday. Jog 440.

WEDNESDAY: Jog 440. Calisthenics. Set the bar at three inches below best height and jump eight times. Raise the bar to the best height of the jumper and concentrate on the same fundamentals as on Monday.

THURSDAY: Jog 440. Calisthenics. Place the bar two inches below your best height and work on the fundamentals of the jump as mentioned above. Stress going over the bar with the stomach-roll style of the Western roll form. Jog 440.

FRIDAY: Prepare for a time trial on each Friday. Be sure that the warm-up is the best suited to each jumper's individual ability. This will have to be worked out differently for each athlete. At the end of the sixth week of training we usually schedule a dual meet with some school. From the sixth week until the end of the season the team competes in a meet every week.

During the fourth week the jumper concentrates on the position of the head and shoulders when on top of the bar. The fifth week is spent in working on the leg kick when going over the bar. The sixth week is spent on the position of the left arm on the chest at bar clearance. It is also the best time to repeat work on

(Continued on page 46)

Playing the Initial Sack

By JAMES SMILGOFF

Baseball Coach, Taft High School, Chicago

THE qualifications of a first baseman are as follows: 1. He should be fairly big so as to present a large target for the other infielders to throw at. 2. He should have a sure pair of hands to enable him to hold on to all throws. 3. He should be good at handling his first baseman's mitt so that all decent throws to him will be sure outs. 4. He should be agile on his feet so that he can shift quickly and properly for all throws. 5. He should be a good fielder. 6. If at all possible he should be a power hitter.

Handling Thrown Balls

The first baseman should be adept at handling all types of throws. The trappers' mitt has made it easier for him to do so. With this type of mitt the first sacker need not handle throws below the waist with the palms turned up as he did with the older type of mitt, or as a fielder would do with a finger glove. Since the ball lodges best in the trap of the glove most first basemen hold the mitt at the best angle for the trap to receive the ball.

On high throws most first sackers hold the palm of the glove facing forward, while on low throws the palm of the glove faces slightly downward toward the ground. Also, the present day trappers' mitt makes it easier for the first baseman to handle all throws, high, low, or wide, with the gloved hand only.

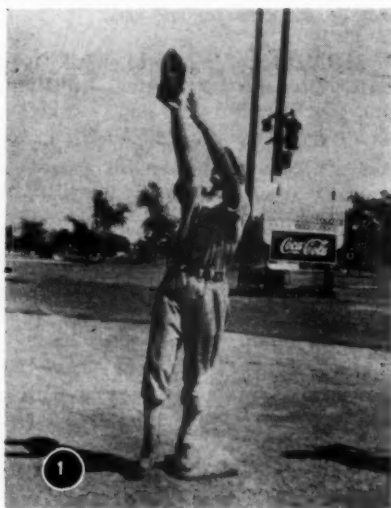
In shifting to handle thrown balls, good first sackers stand on top of the bag when receiving fairly high throws. Thus they make themselves taller, and often do not have to jump

for high throws and leave the base (Illustration 1).

When shifting to the side of the base to receive wide throws the first baseman will find that he will be able to reach farther to the side if he will place his foot against the side of the base (Illustrations 2 and 3).

Handling Ground Balls

Ground balls should be handled with the palm of the glove facing



upward and the thumb of the trap downward. The glove should be worn loosely. Both hands should be used whenever possible in handling ground balls since the ball should be taken out of the trap and held in the throwing hand as quickly as possible so as to be ready for a quick throw.

Ground balls should be handled with the glove well in front of the body, down low, and with the pocket facing the ball.

Catching Pop Flies

There is no excuse for the first baseman to lose a fly ball in the sun. His large mitt should shade the sun well. Also, the first sacker can turn his body and look at the ball at an angle a bit away from the sun while shading it.

On foul fly balls near the grandstand or some other restraining ob-

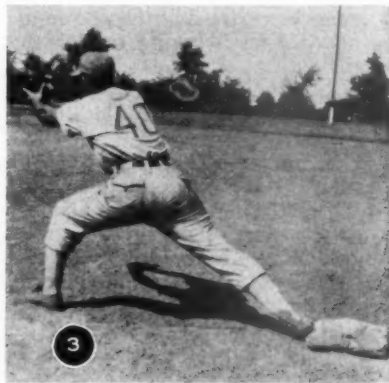
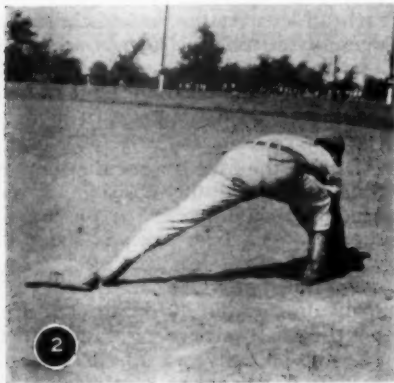
ject, he should run as close to the grandstand or object as necessary and then follow the ball either going slightly forward, backward, or away from the stands to make the catch. In this way he knows how close he is to the stand at the start of making the play on the ball. Furthermore, when playing a foul fly close to the stands there is practically no chance of injury by running into the grandstand or other restraining object.

On fly balls hit close to the first-base side of the pitcher's mound and on those hit between first base and the catcher, the first baseman should call for the ball loudly and often, thus chasing away the pitcher since pitchers do not play as often as first basemen and are not as accustomed to handling fly balls in the infield. On flies hit between home and first base, the first base guardian should keep in mind that the fly ball is descending away from the catcher and toward first base, thus making it easier for the first baseman to handle.

He should allow for a strong wind in fielding pop flies and play the ball so that the wind carries it toward him and not away from him.

Playing Back in Position

When there is no runner on first base the first baseman should play back in his deep position. This position should be as deep as possible, and as far away from first base as possible so as to cover a maximum of fielding territory. The writer has seen too many youngsters play in their deep position without any



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thought as to how much territory they can cover. Too many first sackers are worried about getting to the bag soon enough to receive a throw, and as a result they get there too soon at the expense of not covering enough fielding territory.

A common error made by young first basemen is that of starting for first base when balls are hit just off their right side instead of fielding the ball and tossing it to the pitcher who should be covering first base. When fielding a ball far from first base (about 20 feet or more) the first sacker should give the pitcher a soft overhand throw. When tossing to the pitcher at a shorter distance, he should throw underhanded and be sure to follow the toss by continuing to run in the direction of the toss. When the first baseman stops suddenly in making the underhand toss to the pitcher the result often is a jerky or wild throw.

Whenever the initial baseman, after fielding a ball, is going to run to the bag and tag it himself, he should indicate this to the pitcher in a loud voice and by a glove sign if at all possible.

In trying for the ground ball double-play when playing back, the first baseman should throw the ball on the right-field side of second base since he is stationed on that side. Thus the throw will not hit the baserunner going to second base, and it will also be easier for the shortstop to return the ball to first base.

In trying to pick a runner off base the first sacker should have a signal with the catcher. The latter should give the signal first, and the first sacker should signal back to the catcher that he is ready for his throw.

Holding a Runner on First

Left-handed and right-handed first basemen have to place their feet differently in holding a runner close to first base. A left hander can



stand on the home plate side of first base out of danger of being spiked, and still be able to tag the runner out easily (Illustrations 4 and 5).

The right hander, however, has to reach farther to tag a returning runner out, so he should stand with his right heel against the corner of first base, that is, closer to the pitcher and baserunner.

As the pitcher's arm goes up the first baseman should take a cross-



over step with his left foot crossing over the right, and then take a step with his right foot away from first base so that he is facing the batter in a fielding position.

When the defensive team has a comfortable lead the first baseman may play back a few feet and off the bag behind the runner when only first base is occupied (Illustration 6). The purpose of this type of move is to cover a bit more fielding territory and cut down the batter's base hit territory while at the same time limiting the baserunner's lead at a time when there is little likelihood that he will attempt to steal.

When a sacrifice bunt situation is likely with a runner on first base only, the first baseman should leave the bag with the pitch and come running in toward the bunter to field the ball since the second baseman will cover first base if necessary. When the third baseman fields a bunt under these circumstances, the first baseman may return to the base to take the throw with the second baseman backing him up.

When there are runners on first

and second base or when there is a runner on second base only with none out and a sacrifice bunt in order, the first baseman should take a position about sixty feet from the batter, and charge forward to field the bunt as soon as the batter gives the first indication he will bunt. In this way the first sacker has a chance to field the ball quickly and put out the runner going to third base.

Acting as a Cut-Off Man

In baseball parks where there is considerable space behind the catcher it often becomes necessary for the pitcher to back up the catcher to protect this territory, thus making the first baseman a cut-off man in front of the catcher.

The first sacker should be the cut-off man on all extra-base hits. On an extra-base hit his job is to see that the batter who hit the ball touches first base, then he runs toward the pitcher's mound to line up with the outfielder's throw, and he should be ready to receive that throw if there is no chance to get the runner at the plate.

The first baseman is also a cut-off man on all singles to right and center field whenever there is a baserunner on second base who might score on the hit.

In acting as a cut-off man the first sacker should line up in a direct line between the ball and home plate and then move over one step either right or left depending upon whether the outfielder throwing is right or left handed. A ball thrown by a right-handed outfielder will carom toward the third base side of home plate after hitting the ground. This is due to the spin on the ball as it is released from the hand in making the throw. The reverse is true with a left-handed thrower.

After receiving a throw as a cut-off man the first sacker should be alert and ready to throw out another baserunner.



JAMES SMILGOFF played baseball at Lane Technical High School in Chicago as well as at the University of Wisconsin. After playing professionally he became a farm-team instructor for the Chicago Cubs. This is the second in a series of four articles on baseball by Mr. Smilgo. The first, "Select A Team Scientifically," appeared in the January issue.



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First to drill steel plates instead of punching.

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First to anchor cleat attachment in steel.

First to prevent cleat attachment from pulling through sole.

First to establish manufacturing specifications for rubber cleats.

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The ATHLETIC JOURNAL

Nation-Wide Amateur Athletics

Vol. XXIX February, 1949 No. 6

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MAJOR JOHN L. GRIFFITH JOHN L. GRIFFITH
Founder Publisher

King Basketball

AS this is read some 18,000 high schools will begin to prepare for state tournament play. Basketball has twice as many schools participating in it as any other sport, has the greatest amount of intramural participation and draws the greatest number of spectators of any sport. Basketball madness, which grew up in Indiana, is no longer confined to the Hoosier state. North, East, South and West are faced with the same hysteria. Basketball is truly King Basketball.

With this issue we conclude our basketball articles for the year. It has been a year in which we have taken justifiable pride. We have attempted to cover every phase of the offensive and defensive game from both the collegiate and scholastic angle, as is always our custom. Our list of college authors reads like the "Who's Who of Collegiate Basketball," John Bunn, Cliff Wells, Bill Henderson, Howard Hobson, Ed Krause, Adolph Rupp, Wilbur Stalcup, Phog Allen, Bud Foster, Jack Friel, Tippy Dye, Bruce Drake, Doc Carlson, Jack Gardner and Delmer Brown. Twenty high school coaches who successfully steered their teams to state championships authored articles for us as did four other highly successful scholastic coaches. To all of these thirty-nine authors our appreciation for passing along their thinking to their fellow coaches.

If rearranged into standard textbook format this year's basketball material would make a book of 214 pages. In preparing these articles for publication we read an estimated 106,925 words and our artist drew 218 diagrams. In achieving this stupendous total we carried more than twice as many articles on basketball as any other coaching magazine,

devoted more than two and one-half times more space to basketball than any other coaching magazine, and lastly carried nearly four times as many basketball diagrams as any other coaching magazine.

As the tournament season approaches we wish each and every one of you success. We hope that our articles may be of some assistance to you in achieving this success.

News From the Meetings

THE TWO national meetings in which our readers are the most interested, the N.C.A.A. and the National Federation, have just been completed. Being the only publication devoted to both high school and college athletics, we were present at both meetings. At each meeting numerous problems common to both high school and college athletics were tackled.

Regarding television there appeared to be unanimity of thought. Both organizations indicated a keen interest in the part television may play in regard to attendance. At the Federation meeting two states reported a decline in attendance when the games were televised. During the coming year both groups will watch this feature very closely.

Contrary to numerous reports that plastic headgear would be outlawed by one or both bodies, both organizations gave the manufacturers a *carte blanche* in regard to the manufacture of this type headgear.

Also very much in the minds of both organizations was the matter of outside interest commercializing athletics. At the Federation meetings, all-star games and the like were discussed. The N.C.A.A. voted to continue its study concerning the number of bowl games.

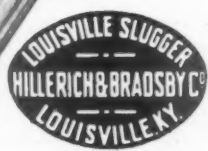
Both the National Federation and the N.C.A.A. voiced interest in improving public relations with the press and with radio. Because there have been instances in the past where certain occurrences have been covered up and hence ballyhooed beyond their significance, both organizations will endeavor to bring all developments out into the open quickly and to explain them fully.

By an open, above-board discussion some of the practices of colleges in luring high school stars to their campuses were brought to light. The N.C.A.A. may well be ready to name names under their new "sanity" code. The general feeling is prevalent that a closer relationship between scholastic and collegiate administrators will be mutually beneficial to both parties in curtailing these undesirable practices.

Both the N.C.A.A. and the National Federation evidenced an earnest desire to work out the

(Continued on page 63)

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The Art of Juggling

By JOE GIALLOMBARDO

Physical Education Instructor, New Trier High School, Winnetka, Illinois



NEARLY everyone has marvelled at professional jugglers going through their complex routines and combinations in which they use balls, clubs, sticks, hats, boxes, hoops, and tambourines, but somehow we exclude ourselves from ever attaining the same skills. The belief that juggling should be confined to the professional stage and night club entertainment is erroneous. We, at New Trier Township High School, Winnetka, Illinois, include juggling in our regular physical education program for those who select Gymnastics and Tumbling. At the last State Physical Education Convention held at New Trier High School, one of the main features was a juggling demonstration by a team of a dozen of our most versatile boys. Balls, rings and clubs were juggled and tossed among the performers in a spectacular display. At our annual mid-term talent show, eight jugglers tossed 24 objects to each other in complete synchronized co-ordination which equalled many performances I have seen on the stage.

To introduce juggling to a beginner the basic fundamental procedures must be stressed. The familiar phrase "Correct practice makes perfect" is certainly the most important note of encouragement that can be added here. It is important to note the following basic rules and suggestions.

1. Balls are tossed and caught with the fingers and not with the palm of the hand.

2. Remember that a good toss results in a good catch.

3. The juggler should look at the ball which has just been released and as soon as he sees that it has been thrown correctly he may continue with the next movement.

4. In the Crisscross or Cascade pattern the balls are tossed under the oncoming ball.

5. Relaxed wrists and a jerky throwing action is recommended.

6. The juggler should never rush and should wait until the first object descends before tossing the next one.

7. He should always stand over a mat or mattress when learning for then the balls will not roll away and clubs and rings will last longer.

8. To overcome tossing objects

forward he should stand directly in front of a wall.

9. Objects must be tossed in predetermined arcs and must fall with precision so that they will be easily caught.

Teaching Procedures

The objects used may be tennis balls or handballs. For single object practice-tosses the student should start with one ball in one hand, tossing and catching it in the same hand. He should repeat and practice this in each hand. (Illustration 1). The wrist action is very important. The ball should be released at waist level and should be caught at chest level.

For the Cascade or Crisscross style two balls are used. The juggler should start with one ball in each hand. He should toss the right hand number 1 ball up and across slightly above the head and let it drop to the left hand. (Illustration 2). As it begins to descend he should toss ball number 2 from the left hand to the right hand in the same manner. The number 1 ball should be caught first — just after ball number 2 has been released. The number 2 ball should be caught immediately in the right hand. This practice movement may be done to the count of one, two, three. In Illustration 3 the juggler starts with a ball in his left hand. The number 3 ball must now be added to the right hand and tossed to the left as ball number 2 descends to the right hand so as to complete the Cascade (Illustration 4).

From this sequence the juggler can adopt all the various patterns of three-object juggling. Introducing other objects into ball-juggling must be done singly. Juggling mixed objects is a real test of the juggler's mental alertness. Illustration 5 shows one club with two balls. Illustration

JOE GIALLOMBARDO received his training in gymnastics and tumbling under Hartley Price while attending the University of Illinois. He won the Big Ten Gymnastics and Tumbling All-Around championship for 1938, '39 and '40 and also the all-around and tumbling event in the NCAA competition for those years. He has been at New Trier since 1940 and served with the Navy during the war.

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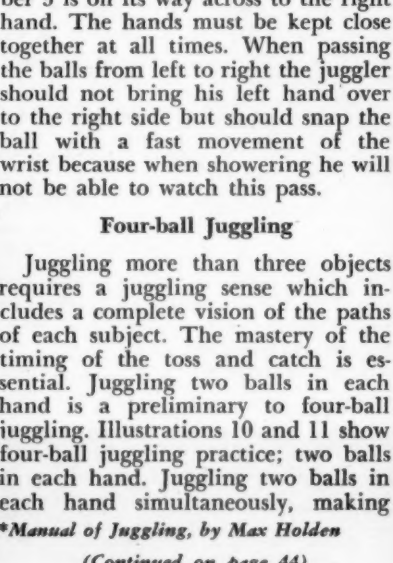
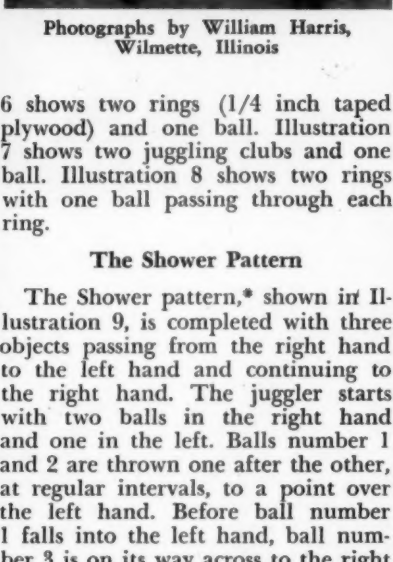
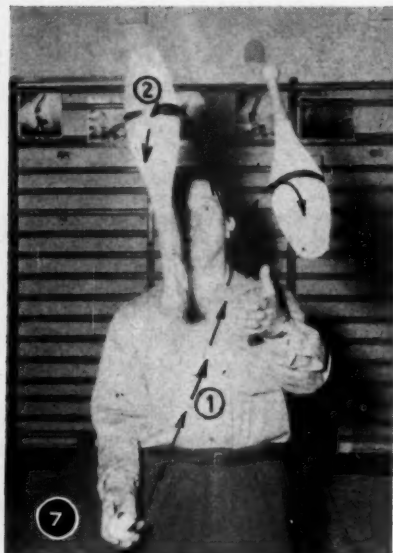
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Photographs by William Harris,
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6 shows two rings (1/4 inch taped plywood) and one ball. Illustration 7 shows two juggling clubs and one ball. Illustration 8 shows two rings with one ball passing through each ring.

The Shower Pattern

The Shower pattern,* shown in Illustration 9, is completed with three objects passing from the right hand to the left hand and continuing to the right hand. The juggler starts with two balls in the right hand and one in the left. Balls number 1 and 2 are thrown one after the other, at regular intervals, to a point over the left hand. Before ball number 1 falls into the left hand, ball number 3 is on its way across to the right hand. The hands must be kept close together at all times. When passing the balls from left to right the juggler should not bring his left hand over to the right side but should snap the ball with a fast movement of the wrist because when showering he will not be able to watch this pass.

Four-ball Juggling

Juggling more than three objects requires a juggling sense which includes a complete vision of the paths of each subject. The mastery of the timing of the toss and catch is essential. Juggling two balls in each hand is a preliminary to four-ball juggling. Illustrations 10 and 11 show four-ball juggling practice; two balls in each hand. Juggling two balls in each hand simultaneously, making

*Manual of Juggling, by Max Holden

(Continued on page 44)



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Fast-Break Fundamentals

By MICHAEL ESPOSITO

Coach, Massachusetts Maritime Academy, Hyannis, Massachusetts

MUCH has been written about fast-break basketball, but very little about the fundamentals used in this offense. In teaching fundamentals for the fast-break game it should be remembered that the specific skills must be developed to a very high degree of efficiency since success depends upon split-second timing. Dexterity in ball-handling, individual trickiness, and situation analysis are very important in orthodox basketball but are not all-important in the fast-break game since speed is the keynote of success. To acquire the precision necessary to follow a specific program of fast-break basketball, great stress must be placed on the fundamentals peculiar to this system.

The fast break is predicated on the premise that the offensive team will usually score if it gets into scoring territory before the defense is set up. However, it is necessary for a fast-break team to be very accurate in its shooting if it is to score consistently. Although accurate shooting is necessary in all types of offense it is more of a requisite in the fast break because the players must score while travelling at great speed. Failure to do so means that the ball will be continually lost to the opponents. Defeats usually follow such failure to shoot well.

Now that we have seen how important good shooting is in the fast break we must learn the best way to teach it. The first emphasis should be placed on form. The players should be taught to dribble in from the side from some fifteen feet out for the lay-up shot. In driving in for

this shot the player should go up off his left foot, head up, gazing steadily at the spot at which he is to bank his shot. This is a very important principle because under game conditions he must do this mechanically.

It is very important that the player make the lay-up shot some six feet from the basket. If he shoots from too far out he will be inaccurate. If he shoots after driving in too far he will not be able to sight the point at which to bank his shot to obtain the necessary accuracy. Each player must learn to drive in at top speed and push off his left foot (if right handed) while looking up at the spot where the shot is to be banked. The shot should be made overhanded and off the finger tips. The underhanded shot may be used whenever it is desirable to draw fouls. The overhanded shot, however, is more accurate when the player is driving in fast.

Careful attention must be given to the player until he has learned to make the shot mechanically. When he has learned to lay the ball up from the right side he should be taught to make it from the left side as well as the center. The shot from the center is the most difficult of the three. The player should bank

this shot for in game conditions the possibilities of scoring are greater if the shot is banked.

Since shooting is of such vital importance to the fast break much time should be spent daily on this routine. About one hour each day is necessary early in the season before the shooting has become mechanical.

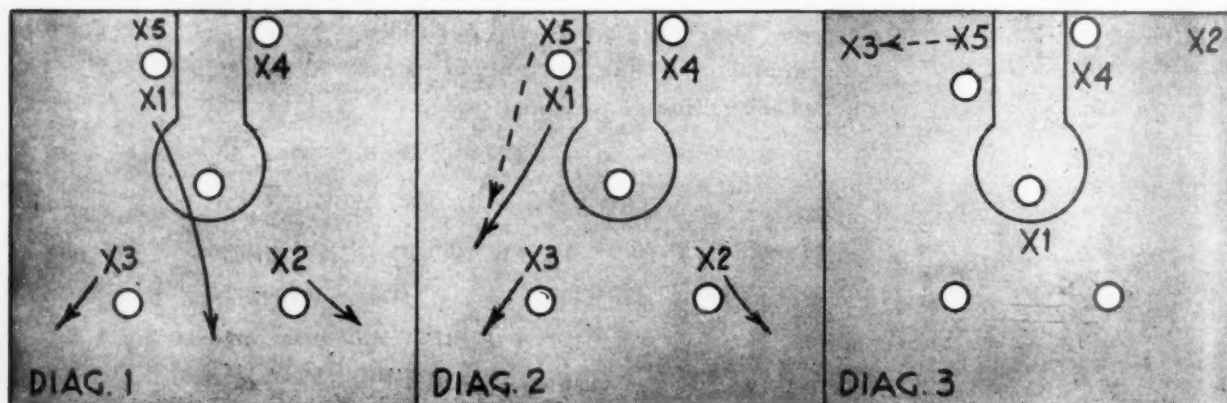
In order to create interest in this routine it is advisable to keep a daily record of how many consecutive shots are made from each side. The players will try to better the record. Before scrimmage begins each player must make ten consecutive shots from each side. This practice tends to have them shoot under pressure and is an essential practice for game conditions.

Dribbling

Since dribbling is a very important phase of the fast break it should also be practiced daily. To set up practices which will approximate game conditions it is best to place two men on defense and three on offense in the offensive area of the court. The three offensive men try to dribble around or through the two defensive guards.

The man in the center position passes to the right forward who dribbles as far as he can, drawing one of the guards toward him and then passes to the center who dribbles in for the shot. This routine is varied by having the same procedure carried out by the left forward and the center. This dribbling practice is invaluable as it helps the offensive players learn how to stop a fast break.

MICHAEL ESPOSITO attended both Montclair State College and Upsala College in New Jersey before he began coaching. He has coached at Union City, New Jersey, Saint Basil College, Stamford, Connecticut, Glassboro High School, New Jersey and at Galesburg, Illinois.

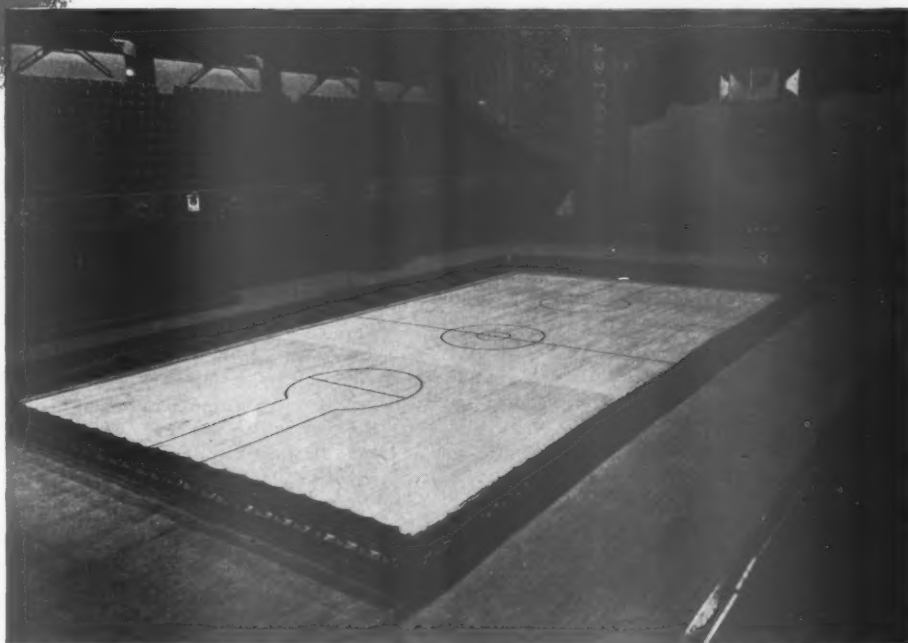


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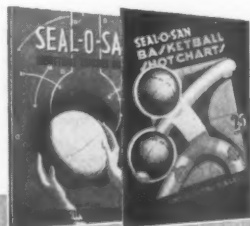
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This routine is a very important one since it approximates game conditions.

When the players have mastered the rudiments of dribbling they may be taught tricky ball-handling. To help the offensive player learn how to elude a guard, a practice routine may be used whereby a player dribbles toward his guard and switches hands in the dribble to get by his opponent for the lay-up shot.

Passing

Spectators at a fast-breaking game are usually amazed by the accurate passing. There is nothing remarkable about this if one witnesses the practice routine of a fast-break team. Literally hours are spent in teaching accurate passing until it becomes mechanical in game conditions.

The best routine for teaching passing is to use a practice that approximates game conditions. The following meets this need: Before practice actually begins the players should form a circle and warm up by passing to each other. They should use the snap pass, bounce pass, and hook pass. These passes are essential for fast breaking. If possible, they should be taught to pass without looking. After ten minutes of this practice the players should run around the circle using the passes mentioned above. They should do this for about seven minutes or until they become winded. They should then be allowed to catch their breath by returning to the warm-up routine. When they have recuperated a little they should go around again at top speed. They must make 25 accurate passes before they stop.

When practice begins the fast break routine is set up. Two guards are placed near the basket, the two forwards up front and the center near the free-throw area. Two players are placed on the sides. One shoots from one side and then the other shoots from the other side. As soon as the player shoots the guards get in position for a rebound. When a guard gets the ball he immediately passes to the forward at the side who begins the break. By manipulating the ball among them the three front men work the ball in for a fast break lay-up.

Fast-Break Situations

Fast-break opportunities arise from many different situations; the most common, of course, are those arising from rebounds. Since these occur most frequently in the game it

behooves the coach to teach his men to capture the rebounds. One of the best routines for this is to place two guards near the basket and two opponents near by. A player shoots from the side and the guards must capture the rebound. Another good routine is to vary this by having two men driving in hard to capture the rebounds from the guards stationed near the basket.

The best of all practice routines is to have a forward on the right, one on the left, and a center in the middle work the ball in to the two guards stationed near the basket, with all three offensive men driving in hard after the shot to capture the rebound. This will teach the guards to capture the rebounds under game conditions. This routine is excellent also for the offensive trio since it teaches them to follow their shots and to capture rebounds for lay-up shots. In order to make this routine interesting the guards and the offensive trio compete to see who can get ten points first. A point is awarded to the offensive trio each time they score and to the guards each time they capture the rebound from the offensive trio. The guards should use a hook pass after capturing the rebound. This is very important as the fast break depends upon the guards' ability to pass the ball as soon as they capture it.

The fast break may also be initiated from out of bounds. As soon as the opponents have scored the guards start the fast break by throwing to the forwards who are breaking down the side lines or to the center who is breaking down the middle lane. This mode of fast breaking was made famous by Rhode Island. Since the majority of teams relax as soon as they score and often trot to the defense, Rhode Island caught many teams napping by immediately getting the ball into the front court. This usually caught one of the defensive players out of position.

Since few teams use this method of attack, college teams facing this style for the first time are bewildered. Several ways of stopping this attack have been developed however. Lapchick, of St. Johns, has a tall player stand momentarily in front of the guard taking out the ball. This maneuver allows the defense to get back to cover up and also distracts the view of the guard so that he cannot get the ball out easily. Another method used successfully to stop the break is to have the defensive players press the offensive players. By covering all possible receivers the de-

fense will intercept many passes from the guards.

Fast breaking also arises from interceptions. This occurs more frequently in high school play. When the pressing defense is used, however, interceptions are frequent even in college play as Rhode Island demonstrates year in and year out.

The fast break is often set up from a missed free-throw attempt. (Diagram 1). As soon as the guard captures the rebound, the center shoots down the middle to set up the three-lane break. The forwards naturally break to the sides as soon as the free throw is missed.

The fast break is also set up when the free throw is scored (Diagram 2). The center runs to the side line and the guard nearest the ball steps out of bounds as fast as he can and passes to the center at the side line. The latter has two alternatives: he may dribble along the side line, drawing the guard to him, and then pass to the forward who has run ahead of him, or he may dribble down the middle lane as soon as he obtains the ball, thus setting up the three-lane break.

Another fast break play that may be set up from a missed free-throw is shown in Diagram 3. This is the more orthodox defensive alignment for free-throw shooting. The guards, instead of capturing the rebound, tap the ball to the forwards on the side. The forwards try to feed the center if he can manage to get away from the defensive guards, or they may try to dribble as fast as they can into the front court trying to get three men on the two defensive guards.

The center plays relaxed until he sees his guards tap the ball to his forwards; then he speeds down the court, usually one step ahead of the defense, and is in position to receive a lead pass.

I will now summarize the fast-break fundamentals. A team must be accurate in its shooting (while travelling at top speed); it must be able to drive into the basket at top speed and lay the ball up from both sides as well as the center; a team must be very good at dribbling and very accurate in its passing; it must be able to get the rebounds and pass quickly; a team must be able to initiate the fast break from out of bounds and from interceptions; it must be able to initiate the fast break from missed free-throws as well as from free throws that are scored.

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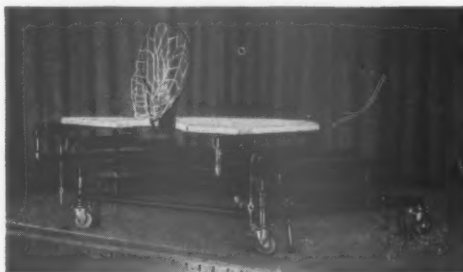


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The Football Coach's Future

By HARRY G. CLAGG

Coach, Huntington, West Virginia, High School

MORE EMPHASIS has been placed on athletics since the end of World War II than at any other time in history. More money is being spent to finance athletics and larger gate receipts are causing the athletic funds of many high schools to prosper. Our experiences in the war have shown the tremendous value of competitive athletics, particularly football. The government spent thousands of dollars in order to maintain football as a measure of mental training and physical conditioning for its members.

What effect has this emphasis had upon the coach? What is his status? How secure is his position? What does the profession have to offer as a career? It was with such problems as these in mind that the following study was undertaken.

Introduction to the Problem

In the early days of athletics, the initiative for organizing school teams usually came from some of the students who wished to engage competitively in their favorite sport. Occasionally one of the younger high school or college teachers who had carried with him some of his enthusiasm for amateur sports, implanted the idea of a school team in the minds of the undergraduates. On the whole, however, the earliest teams were formed by a few students in each institution who were athletically inclined.

Shortly after the turn of the century educators began to realize that athletics was becoming an important extra-curricular activity and was being taken over by undesirable teachers in the community.

A reorganization placed boys under the guidance of regular teachers. Even before this reorganization was completed another change began to take place. It was realized that in order for the teachers to do a good job with the boys they needed training in biology, anatomy, physiology, and psychology. This naturally led to specialization, to full time work in physical education and athletics. The professional coach has since become a reality.

The development of the professional teacher-coach, however, failed to bring scholastic athletics out from un-

der the influence of the public. In some cases evils worse than what existed before have been developed.

The unreasonable demands placed upon the coach for winning games have brought about repercussions in the more important aspects of the coach's influence and teaching. The coach who does not win most of his games is often asked to resign and a "winner" is hired. Tenure has become uncertain. In many cases the coach is willing to forget educational values if it will win games. Some educators as well as the public have forgotten the educational possibilities in school athletics.

The coach's problem is a most difficult one. When a coach's position depends upon the will of the alumni, townspeople, and fans, conditions unsatisfactory to the coach are likely to result. He wants to produce a winning team and remain in good standing with the boys. He is apt to tolerate almost anything at times. This influence often carries over to the teachers, and eligibility rules are warped completely out of shape to fit different cases.

In some instances, communities have become so interested in having a winning team that they have refused to support the high school principal in his efforts to maintain clean athletics. Sometimes the control of athletics may pass completely out of the hands of the principals and into those of the school board or politicians.

The outside pressure of the public is driving the coach to go against his own educational philosophy in order to meet the public's demands. He may play a boy who he knows is not physically able to take part in the game. He may teach unethical tactics because he knows the consequences if his team loses.

Making the Survey

The State of West Virginia offers itself as a fair sampling of the average athletic situation in the country as a whole. Our high schools range in size from 2500 pupils on down. We have many small high schools as well as several large ones. In the school year in which this study was made there were 153 high schools supporting football teams. About 110 coaches

HARRY G. CLAGG played football for three years at Marshall College, Huntington, West Virginia before he began coaching at Milton, West Virginia, High School. The past four years he has been coaching at Huntington High School and last year helped coach the South team in the annual North-South high school football game. His brother, Sam E. Clagg, is coach at Marshall College.

in the largest of these schools were contacted for information. An equal number of high school principals were also questioned to serve as a check on the answers submitted by the coaches.

The results were tabulated and are here given in condensed form:

1. One-fifth of all coaches employed in West Virginia during the school year of 1947-48 were either new to the profession or had changed to new schools that year.

2. It was found that coaches had spent an average of 6.71 years in their present position. That is, the position held in 1947-48.

3. Football coaches in West Virginia have spent an average of eleven years in the profession.

4. A football coach in West Virginia will stay at one school for an average of 4.78 years.

5. Three-fourths of all head football coaches have changed positions at least once.

6. The coaches' reasons for changing positions, given in order of importance are: economic, professional, personal and social, and political. (The principals stated that the coaches' failure to win games was the leading professional cause for changing positions. Coaches are naturally reluctant to mention that factor.)

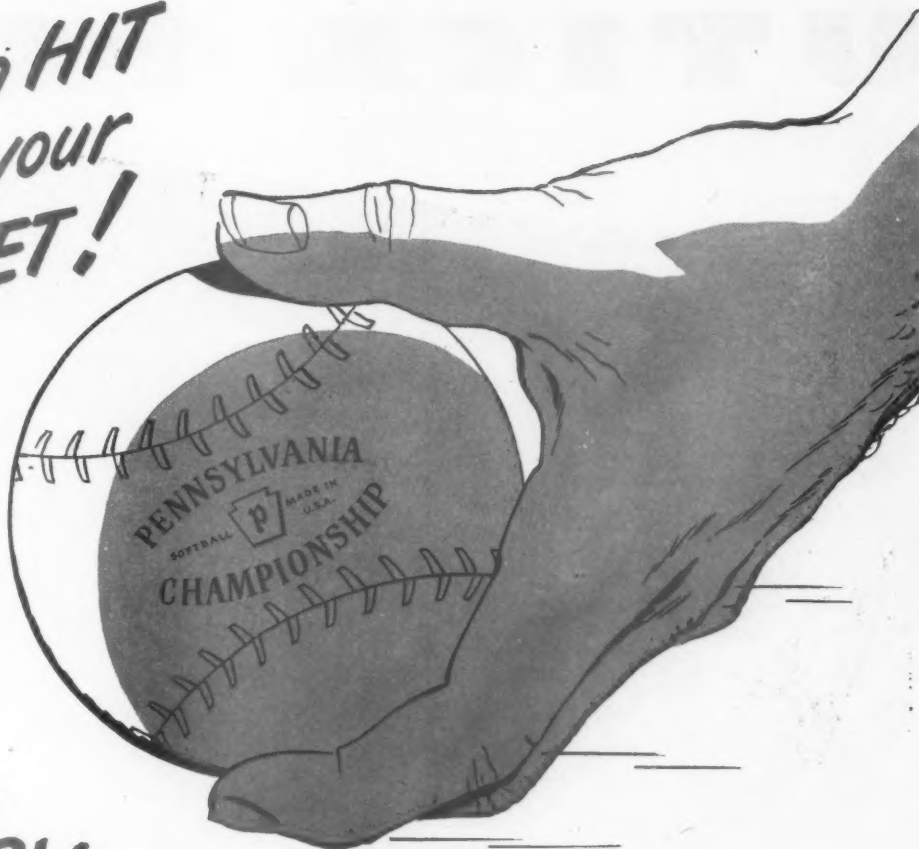
7. Politics and prominent citizens have the greatest outside influence in the selection of a coach.

8. "Curbstone coaches" and "drug store gossips" have no influence on the tenure of the coach in 28.78 per cent of the schools; very little influence in 53.03 per cent and a considerable amount in 18.18 per cent of the schools.

9. School patrons demand that the coach win games in order to hold his position in 28.78 per cent of the schools, while in 71.72 per cent no such demand is made.


(Continued on page 48)

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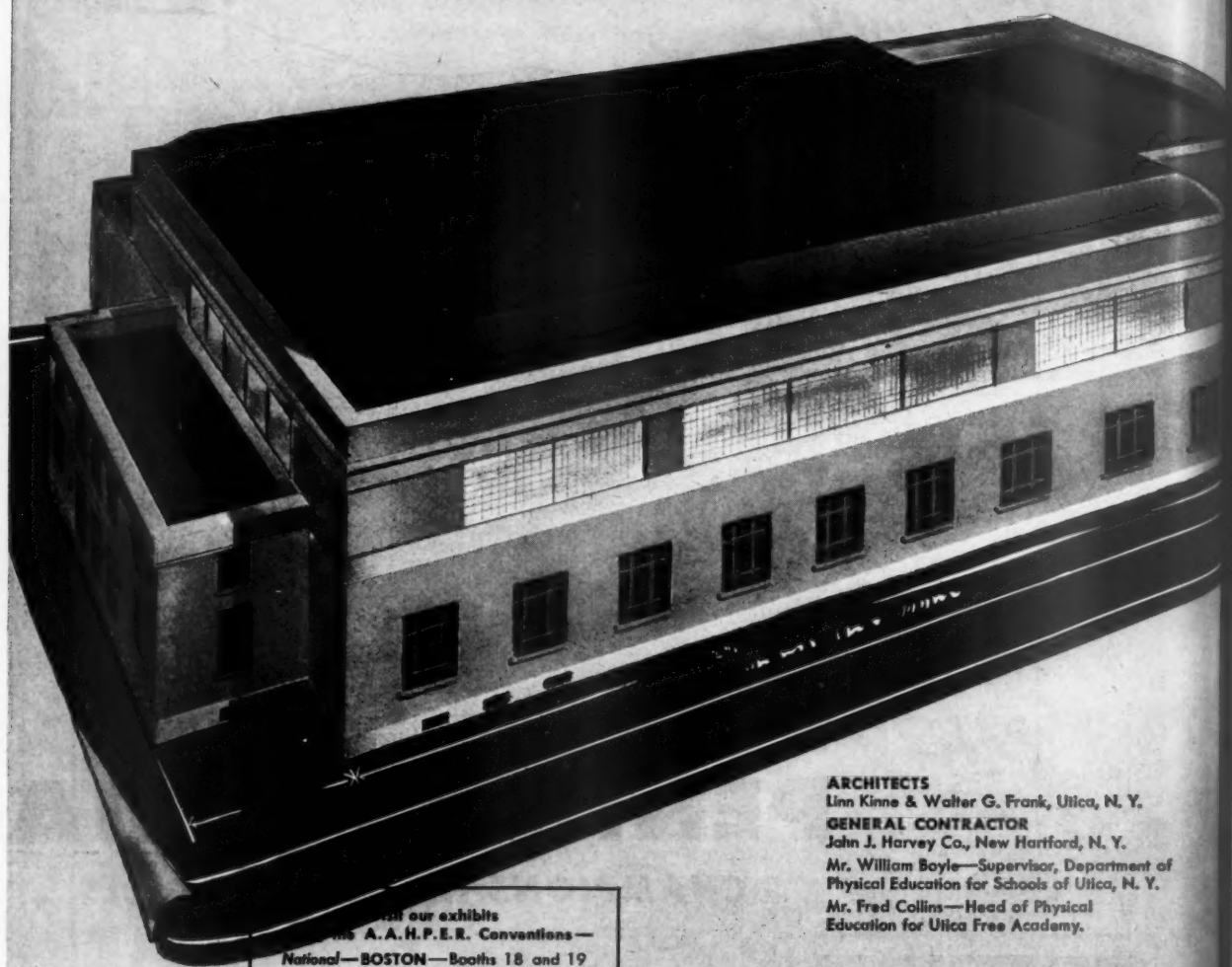
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Combination Defenses

By **CHALMER WOODARD**

Coach, Liberty Memorial High School, Lawrence, Kansas

IT IS NOT the purpose of this article to give any sure formula for stopping all kinds of offenses. My only intention is to present, in as brief and simple a manner as possible, the various types of defenses and combinations that we use here at Liberty Memorial High School.

Not many years ago, football coaches found that it was possible to teach boys more than one defense. They also found that if a change in defense was made it often confused the opponent. We use changing defenses in both football and basketball.

We classify defenses into three main divisions, with two or three types under each division as follows: Regular (Man-for-Man, A-Zone, B-Zone) Press-Out (Man-for-Man, A-Zone, B-Zone) Rush (Man-for-Man, Zone).

The regular defenses are more or less standard in this part of the country, and as might be expected, are used more often than the others. In our regular defenses we drop back into our back court and set up before our opponents come into that area. In this defense we are conservative and take few chances. We try to keep our opponents from working the ball in for inside shots and give them as little time as possible on longer set shots. In the regular defenses we always try to maintain good rebound position so that when a shot is taken we have a good opportunity to recover the ball. For this reason we seldom try to steal the ball or intercept passes.

In our regular man-for-man we slide through screens and switch men as little as possible. We play our man

very loosely when he is not close to the ball or the basket.

Our regular A-zone is a 1-2-2. A typical line-up would be as shown in Diagram 1. The B-zone is a 2-3 as indicated in Diagram 2. In both of these defenses we shift with the ball and concentrate our men between the ball and the basket.

Our press-out defenses are about the same in name and pattern as the regular, only we have a different purpose in mind. While we formerly allowed the offensive team to be the aggressor and merely protected in the regular defenses, we now plan to put pressure on the offense as soon as they come into their front court. We

CHALMER WOODARD played football at Southwestern College, Winfield, Kansas. Following his graduation he coached football and B-team basketball at the following Kansas high schools: Kingman, Dodge City, and Lawrence. In eight of nine years his football teams have won or tied for league championships. His nine-year record in football is 70 won, 10 lost, 2 tied. He took over as head basketball coach last season and his team won the state championship.

still try to apply sound defensive fundamentals but we take more chances and try to make it hazardous for the opponent to dribble or pass. We try to intercept any ball we can get our hands on.

The defenses discussed thus far apply only when the opponents get into their front court. This still leaves half of the court to be protected. Since there is a ten-second time limit in which the offense can keep the ball in their back court, we find it profitable to apply pressure in that area also.

In our man-for-man rush we try to play close enough to our man so that it would be dangerous to pass to him. We remain alert for screens and pick-offs at all times. We want the offensive man to feel that he is being played too close and must keep on the move.

In the zone-rush we set up in a 2-2-1 formation as shown in Diagram 3. In this zone-rush we want the offensive man to feel that he is open and invite passes to him. Depending on the location of the ball, we try to protect certain passing and dribbling lanes and try to hurry the offense.

The type of defense that we use against a particular team may depend upon several things. When we feel that our team is equal to the opponents in personnel we usually use one of our regular defenses. The regular man-for-man is usually preferred by the boys because each likes the individual responsibility of holding his man to a low score.

When a team likes to use an outside roll around the free-throw circle, we often use a regular zone defense. A B-zone is used if the offense has three men on the inside and the A-zone if it has two men inside.

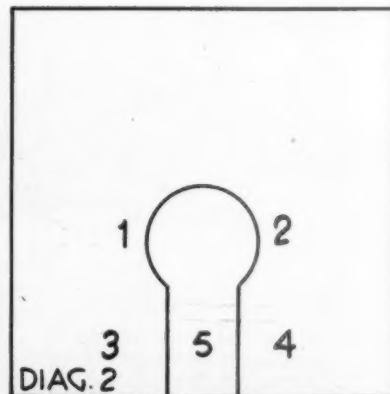
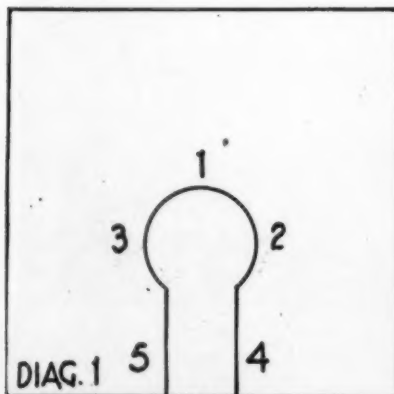
Against teams that like to work from a set pattern we often use our press-out defense. In other words we attempt to change the tempo of the game and make the timing of their play options more difficult. We find, also, that any weakness in ball-handling tends to show up in this type of game. The press-out defense, of course, is a "must" if it is late in the game and we are behind.

The ten-second rule in itself puts pressure on the offense in its back court. We use the rush defenses to increase this pressure. It takes only a few tie balls or intercepted passes to throw a polished ball club off its game for a time. Again, if behind late in the game, we attempt to force the play over the entire playing area.

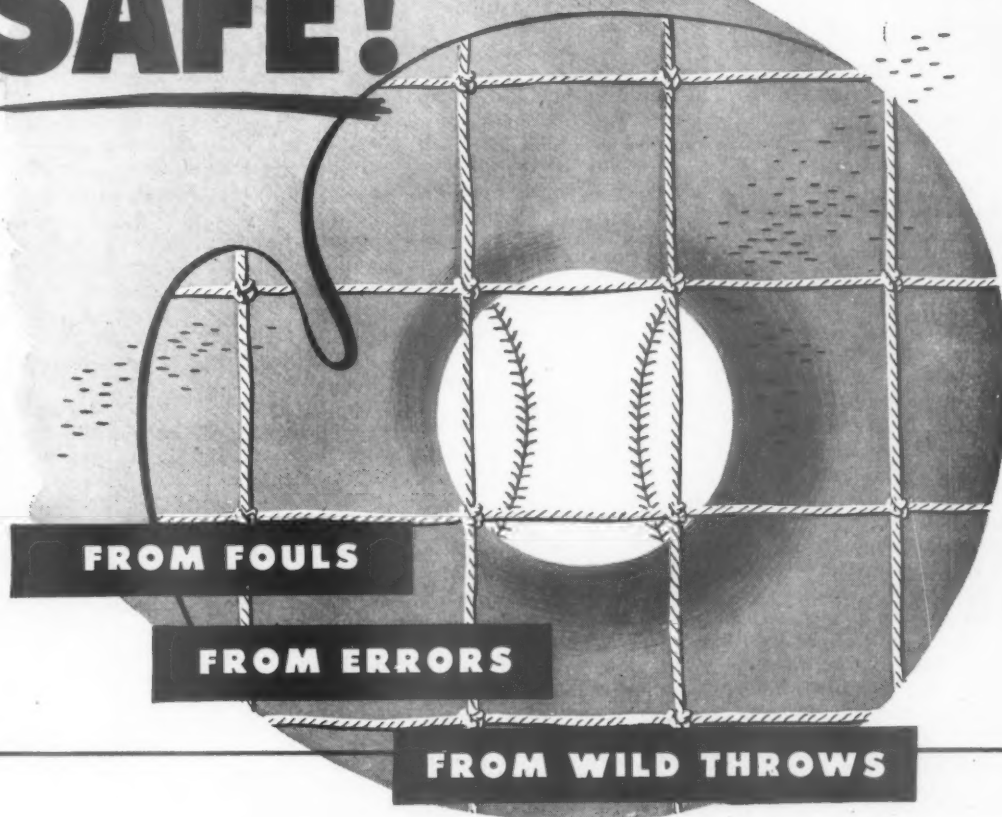
We also find that by using as many different styles of defense as we do we are able to play offensively against all of them.

In teaching our defenses we usually start our sophomores out on the regular zones. We concentrate on staying between the ball and the basket and maintaining good rebound position. In a short time boys can learn this type of zone defense well enough to have confidence in it. This gives us a little more time to work on our offense for our early season B squad games.

(Continued on page 61)



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Financing Athletics In A Small School

By **GEORGE KATCHMER**

Coach, Newport, Pennsylvania, Union High School

THIS ARTICLE has been written primarily for those schools that have less than 300 students and do not have the benefit of lighted stadiums and other facilities that might ease the burden of financing the school's athletic program. It has been written with the paramount objective of advising the officials of small high schools, that are faced with the problem of keeping sports on the school's extra-curricular calendar, on ways and means of meeting the problem wholly independent of the local school board. Of course, much of the success of raising money will depend upon the local situation and the harmony that prevails between the coach, the high school principal, and the student body. If this harmony prevails much can be done. In dealing with the principal, the coach should be energetic and full of enthusiasm. The principal is a busy man and can allot very little of his time to sports. The coach should be the aggressor in initiating new ideas. The coach, however, should always consult and advise the principal of anything he has in mind. The principal is responsible for everything conducted under the auspices of the school and he may make many valuable suggestions.

On the other hand, the principal also must be co-operative. He should be willing to stretch school policies a little to accommodate projects that will benefit the school. I do not mean to infer that he should violate any school policy that would involve him in a controversy with the local board or the students' parents. I mean such minor schedule revisions as excusing a few boys during study periods, using the activity period for carrying out a proposed project, etc. There are countless ways this can be accomplished without incurring disapproval from outside sources.

The principal must be sympathetic and understanding. He must be willing to accept suggestions from the coach and not try to be the dominant figure in every school project. Some principals want to dominate the athletic program and are very reluctant to take suggestions or allow the coach much initiative. If such conditions prevail very little

can be accomplished unless the coach plays a very diplomatic role in presenting ideas which the public will believe to be those of the principal. The principal should allow the coach a free hand to the extent it is feasible under good school policy.

Last but not least, the success of the program rests upon the co-operation of the pupils. They are the best source for good public relations.

Much depends upon the coach and his skill in handling boys. He must take the boys into his confidence and let them know what is going on. He should explain the situation to them (expenses, receipts, debts, etc.) and tell them his plans for them; what he would like to get for them; what they should have in the way of equipment and facilities. If this is done in an enlightening manner, with emphasis upon their part in the success of any venture, ninety percent of the battle will be over. Boys will work with full enthusiasm if they know their coach wants them to have everything in the way of equipment and other facilities.

I would suggest that both the coach and the principal read this article and decide which of the suggestions listed below would suit their own local situation. There is a strong possibility that many of these may not fit into a school's local situation but they may furnish some ideas.

Game Guarantees

This item revolves entirely around a school's scheduling policy. It may apply in only a few localities. Our experience and situation brought about the following conditions.

We play a ten-game schedule every year with teams not farther than fifteen miles away. In recent years our student enrollment gradually declined while that of our rival schools increased. They built modern stadiums. To drop most of them from

the schedule would have necessitated making trips of anywhere from 100 to 200 miles round-trip. We decided to keep them on the schedule and play these larger schools away from home with a large guarantee provision in the contracts. For example, we receive \$125.00 to travel six miles. Space prohibits answering the arguments that might be made against playing schools out of our class, but this much I can say: In three years we had no accidents outside of minor game bruises, and we never took a walloping from these larger schools. We found that the boys played harder, relished the competition more, learned more football, and played in modern well-constructed stadiums.

Gate Receipts

We play teams that are in our class on a home and home basis. This, however, does not mean that we play them at home where we have an open field with no fence or seating facilities. Rather we rent the nearby stadium (six miles away) and play night games. Our arrangement with the stadium officials involves very little risk. We guarantee them one-third of the net profit and we get two-thirds. The expense of the stadium, lights, police, officials, etc., which amounts to around eighty-dollars, is first deducted. We have done well under this arrangement.

Football Programs

This is a good money-raising project. We obtain ads to pay for the printing. It is easier if the school is near a rather large shopping center that does a lot of advertising. The more ads a school collects the larger will be its profit. Most printing companies charge four to five dollars a page for printing. Picture cuts cost from two to three dollars each.

Schedules and Refreshments

We print pocket-size schedules as well as window display-card schedules with some local merchant's advertisement on it. This pays for the schedules and allows us a few extra dollars. At all of our sports activities we sell soda pop, candy, etc. It is surprising how much is realized from this source.

Class Game

Every year a week after the last football game has been played we have an inter-class game in which the senior-freshmen team plays the junior-sophomore team. We dismiss school the last two periods for those that are going. The game is played on our own field. The students are charged ten cents. Each team is run by two boys and the officials are school teachers and local boys. Adults of the community are charged twenty-

GEORGE KATCHMER graduated from Lebanon Valley College in 1940 and began coaching at Cherry Tree High School, Pennsylvania, the same year. After serving almost five years in the Army he returned to Cherry Tree. He went to Newport in 1948.



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five cents. It is surprising how many show up for the game. There is little if any expense involved in staging the game.

School Store

This is really a money-maker. I was fortunate to have a sizeable office in the school basement in which I installed a candy show-case and an electric water-cooler for soda pop. I ran the store with the help of the varsity club boys. We sold candy, pop, gum, potato chips, peanuts, etc. at from a cent to five cents above retail prices. In two years the school store showed better than fifteen hundred dollars profit.

Hall Rental

This can be a good source of revenue. We rent our auditorium to local bodies and charge what the tariff will bear. We do not own the hall but we lease it yearly. We have a good rent revenue.

On basketball trips we hire a large bus, usually the local school bus, and charge student spectators so much per trip. We have a section for our team to ride comfortably. Often we have room for twenty or more spectators. At fifty cents each we find half or most of our trip paid for depending upon the distance traveled. This will save a team plenty on the over-all expense of the trip.

Athletic Banquet

We hold one annual athletic banquet. Most banquets are sponsored by town enthusiasts or organizations. We are not that fortunate. We sponsor ours alone with only the help of a few town women who serve as cooks. Banquets are an expense but we make ours pay. We get the pupils to donate all the food except the meat, which we buy. This donation is voluntary. We merely make known what is needed. The pupils come to us and make their contribution pledges.

Next we ask people in town to sponsor a boy by buying a ticket for him. Many a civic-minded citizen will buy ten to twenty tickets for the boys. We have two such citizens who donate thirty-five dollars each year between themselves. The next step is selling the tickets to the public. We limit the banquet to 200 people. Even in such a small community we have trouble trying to accommodate all the people because we make the banquet attractive by what we offer. For example, we had Stan Musial of the St. Louis Cardinals as our guest speaker last year plus a selection of sports movies and other entertainment. Expensive? No. Mr. Musial spoke gratis. Bear in

mind that this is the exception and not the rule, but a school can provide similar attractions if it is on the look-out for them.

Scrap Drive

This is just what the name implies. We get about ten of our boys and a truck and then comb the town and surrounding areas for scrap iron, newspapers, etc. We then price the nearby scrap dealers and accept the best offer. Scrap iron brings a high price. We can realize \$200.00 in one big drive.

Intramurals

Here again the whole project will depend upon the co-operation of the principal. In our school the principal permitted us to have basketball intramurals during the activity period. He had the daily schedule of classes set up so that one period of the day was an activity period which took care of play rehearsals, newspaper work, club activities, etc. I organized the boys physical education classes into an intramural basketball league. We played games during the activity period and at noon since practically all of our boys were commuters. We allowed all students without any activity engagement to come to the games and charged them a nickel. One prerequisite was that they have all of their school-work done. The response was very enthusiastic on the part of the pupils. We usually averaged ten to fifteen dollars a week on intramurals.

Raffles

This method of raising money is a good one but again it will depend upon local ordinances and laws. Some localities consider it gambling. We get books of tickets printed and then raffle off anything from a pig and turkey to a suit of clothes. We distribute the books to the pupils and let them canvas the town and near-by communities. The purchase is considered a donation for athletics. On the day the lucky ticket is to be drawn we have enough witnesses present to see the drawing. We usually have our drawing at some athletic game. We charge anywhere from twenty-five cents to a half-dollar per chance. We cleared slightly over seven hundred dollars raffling off a turkey and two suits of clothes.

Hillbilly Shows

Our best source of revenue was putting on hillbilly shows from different radio stations. These attractions work on a percentage basis in most instances and a school can't lose any money. We get a good-sized hall and book a show for every school month. We ran one show, then two, then three due to increasing

attendance. A show can be booked by merely writing to a radio station. They will either send their terms and open dates or refer to their booking agent. If a good booking agent is contacted he will be able to get any kind of radio, stage, or screen attraction. A school can realize at least a thousand dollars in a year, if the community likes hillbilly shows.

Movies

Every Friday afternoon we have two activity periods during which we show movies to the entire school, elementary and secondary. The movies are usually based upon history or literature. We show shorts and cartoons to the grade children. The first four grades pay a penny, fifth to seventh pay a nickel, and eighth through twelfth pay a dime to see the shows. It is not compulsory for anyone to attend or to pay if they do attend. We explain to the pupils the purpose for charging and that the profits will go to defray athletic expenses. We have practically one hundred per cent co-operation.

Square Dances

This works best if a local string band can be organized to play gratis at the dances. After every second or third dance we hold a dance for the orchestra in which they take the proceeds.

Varsity Night

Once a year the varsity club puts on a stage show in which all material is written, directed, and produced by the coach and the boys. Our show usually has two one-act plays and a radio show. We try to imitate a regular radio broadcast by using singing commercials based on local business concerns. Soap operas are written burlesquing the big-time radio acts. The show lasts two hours. Boys take girls' parts in the plays which adds to the merriment. In two years this show has drawn the largest crowds of any shows put on by the school. There are no royalties or other expenses involved in putting on a three-act play.

Roller-Skating Parties

If there is a roller-skating rink nearby, it can usually be rented on an off night on a percentage basis. We print our own tickets and sell them to the students and townspeople. We also advertise the party as being open to the public. We are sure to make money because we are working on a percentage basis.

I have briefly described eighteen ways of raising money. There are other means besides the ones listed but these may serve as examples of what can be done and enable a school to start its own fund-raising campaign.

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Approximate number participants: Boys _____ Girls _____

School enrollment _____ Approximate dates of tournaments _____

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Building Athletic Field Turf from the Bottom Up

By F. N. PRICE SUPPLEE

IN THIS article I will outline the various steps in building turf for an athletic field. The cost will range from a relatively small investment of \$1500 for a rebuilding job to as much as \$25,000 for a complete program.

There are many varying factors in building turf, which depend upon geographical location, and it is impossible to give one set of specifications which will be correct for soil conditions everywhere. Regardless of location, however, the basic factors given here will furnish data to check against when building or rebuilding an athletic field.

Before beginning I would like to mention the varying factors which prevent our setting up specifications for all areas. The three main variables are soil, climate and weather. In soils there are three types of clay — white, yellow and red. Also there are sand, shale, and rotten rock soil types and variation in colors and types. For instance, in sand there is gravel and also fine bar sand.

The amount of money spent on the job is not the only consideration, nor is snapping up the lowest bid the way to get the best job. As stated previously (January issue) the survey by competent authorities comes first, then the specifications by the same experts and finally the supervised work. When this has been done the major problems are solved. If these basic steps are neglected the ill effects will crop up five years later.

Let us suppose that the budget permits an expenditure of from \$5,000-\$25,000. Let us also suppose that only the best is desired. The first step is contacting the turf authorities who will make the survey and the specifications and the supervising. Here are a few points that will enable one to talk to and understand the expert.

The location of the field — this includes its elevation, the direction in which the field lies and its exposure to weather. A field that drains either too quickly or too slowly is undesirable. Correct drainage is achieved by a layer of cinders four to six inches deep. If conditions are unusual a layer of stone or tile may be also used. Soil as already noted, differs widely in many ways but all soil is composed of basic ingredients. The ratio of these basic ingredients in a soil is vital. Soil composed of 65%

clay, 25% sand or shale, and 10% organic structure, all measured by volume, has a good consistency. (I have discussed organic to a considerable extent in a previous article.)

How the field will be used must be known when it is built. How often, how long, and how hard it will be used are all factors that must be considered.

Now let us suppose that the grading has been done, the drainage is in, the new top soil rich in organic is in, and all have been brought to the required grade for finished seeding. There is now a good saddleback the entire length of the field. Care must be taken not to make the field surface hard by truck wheels before the top soil and organic have been placed as this is vital for good grass growth. When one walks over the field just before seeding it should be resilient but not spongy.

The next step is to care for the field and the same care used in new seeding will have to be repeated to a lesser extent annually for many years. Advice on such things as watering, seeding, fertilizing, rolling, cutting and weed control, must be given by an expert. They will vary with different parts of the country.

The maintenance of the field is a continuous operation, but if the steps outlined above have been done correctly the maintenance will be greatly facilitated. Care must be taken not to over-use the field. Here common sense is a sufficient guide.

The time required to develop a field depends upon the type of field desired. As previously stated it will vary from one to three months from the day the dirt starts to move. The best time of year to have the work done is also important and here the advice of a local expert should be followed.

If only \$1500 is available for an athletic field a good job can be done

(Continued on page 59)

F. N. PRICE SUPPLEE is an athletic field turf specialist who is writing four articles on his specialty for these pages. His first and second articles appeared in the September, 1948 and the January, 1949 issues. His last article will appear in next month's issue.

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By WILLARD WEAVER

Basketball Coach, Elko County High School, Nevada

ANY ARTICLE written about the zone defense in this era of high speed, pressing, man-for-man defense will be looked upon by many coaches as heresy. The cry immediately goes up that the zone will ruin basketball, the scores will be low, public interest will wane and basketball will again be played before a handful of people. This argument seems a little far-fetched to me since most coaches try to attack a zone before it gets set up and will agree that one of the strong points of a zone defense is the fast break possibilities it sets up. Where then does the slow down come?

A zone defense may be either defensive or offensive in character, depending on the ideas of the coach. A defensive zone is one in which the front line "chasers" drop back as the ball passes them and aid the rebound men to recover from the backboard, while an offensive zone allows the "chasers" to remain out and depends on the rebound men to get control and initiate the fast break.

A defensive zone, by dropping the "chasers" back, throws away one of the chief advantages of the zone defense — that of having men in a favorable position to fast break. It is true, if a team concedes the superiority of another team and enters the game with only the idea of keeping the score down this type of zone will work, but who wants to do that?

With the idea of winning games with a zone defense, let us look at some of the possibilities of an offensive-minded zone.

A zone defense, contrary to the be-

lief of some coaches, is not something that can be taught by telling the boys, "Drop back on defense and take certain positions, we are going to play a zone defense". A good zone defense has to incorporate all the individual defensive fundamentals with the ability of the players to cooperate with each other and move as a unit. Thus, unless a coach is prepared to spend many long hours and a lot of patient hard work he should not use the zone.

In order to develop a zone it is necessary to spend long hours work-

WILLARD WEAVER attended both Whitier college in California and the University of Nevada, playing football and basketball at both. He served as an assistant coach at the latter school for two years. He has been at Elko for nine years where his teams have reached the finals of the state tournament three times. Last year his team won the title.

ing on the maintenance of a defensive triangle around the basket. The 2-1-2 sets up originally in a perfect position for this but as the offense moves the defense has to move to meet it and then the problem of getting back into position develops.

To meet this problem let us look for a moment at the spots in which the 2-1-2 is weakest. (Diagram 1 — areas A and B). In order to cover these areas it is quite apparent that either the guards or the center must shift to meet a threat from this area. Unless a team has a fast flexible center it is probably easier to have the guard shift up and the center drop back to take his place. For instance,

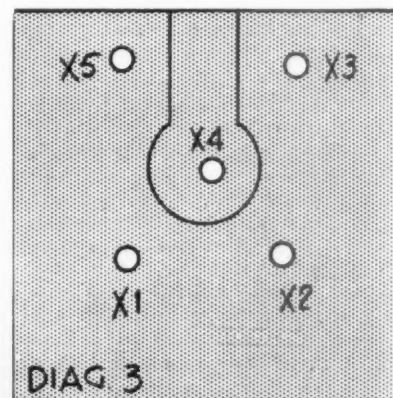
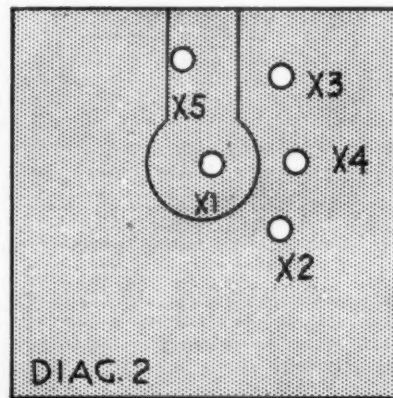
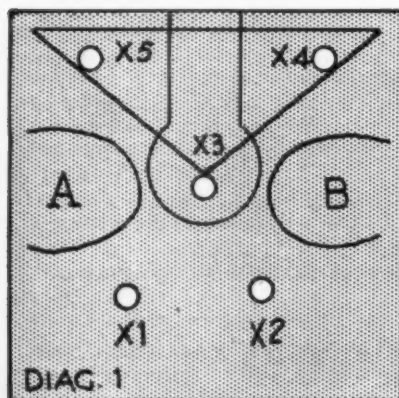
if the ball was advanced into shaded area B, the guard, X4, would move up and the center, X3, would move back to take his place. The completed shift is shown in Diagram 2. It will be noted that forward X1 has to drop back to cover the free-throw area. Also, if desired, forward X2 can drop back and double-team on the ball with guard X4.

Now, back to the problem of the defensive triangle. From the positions of the players in Diagram 2 it may be seen that it is easier for guard X4 to move to the center and let X3 remain back, thus only one man really has to shift and the men are back in the original set-up with the exception of X3 and X4 who have changed places as illustrated in Diagram 3.

All shifts are made with a boxer's or wrestler's glide with the player always facing the ball and looking for a chance for an interception and a fast break. In order to insure rapid and smooth shifting it is necessary to spend a great deal of time practicing the shift. Here at Elko I use a mass drill a great deal. The squad spaces itself on the floor facing either the coach or a squad leader and shifts to commands of "front", "back", "left", "right". Strict attention is paid during the drill to the fundamental defensive position of each player to see that it is maintained at all times and that the feet are not crossed during the shift.

Maintaining a defensive triangle is not our sole concern; we spend a great deal of time on rebounding and on the pass out by the rebounder. I believe that the first pass is the key to the fast break and must be worked on together with the rebounding.

At the start it is probably better to drill on this phase of the defense without opposition. A drill which may be used is to divide the squad into teams with the teams alternating in the drill. The first team takes





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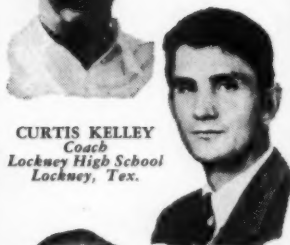
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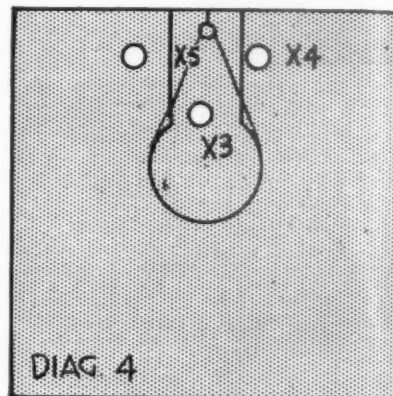
a normal 2-1-2 position and the ball is given to one of the forwards who shoots. Following the shot both forwards break to the side lines to receive the first pass out and, since the straight-line fast break is the most simple, the center may break straight up the middle. Should the center rebound the ball, the fastest guard is usually assigned to break in his place so that he may concentrate on his pass out and not have to worry about breaking. After the first pass out, short passes are used to advance the ball into a scoring position and the next team takes the floor to repeat.

I use two variations of this drill depending on whether I want to stress our defensive rebounding or our 3 on 2 offensive work. For the first I place three offensive men in the weak spots of the 2-1-2. The defense has to shift but the offensive men are allowed to take their shot. After the shot the restrictions are lifted. The offensive men try to follow and it is up to the defense to get the rebound and make their pass out if the fast break is to proceed without opposition. For stressing work in the 3 on 2 situation two defensive men are placed at the other end of the court and we go back to our original drill set-up. The forwards shoot, the fast break is started but this time opposition may be placed at any point the coach feels is best, since the two defensive men can meet the break at any point.

Thus with the one drill and the two variations mentioned, I feel we have a drill which covers the points I think are most important — shifting to cover offensive men, maintaining the defensive triangle after the shot, rebounding, the first pass out and the work in the 3 on 2 situation.

The defensive triangle is the heart

of the defense. When the boys have learned to shift into the triangle automatically it is necessary to teach them how to screen the offense out and to stay far enough away from the basket themselves. One of the hardest things to teach high school boys is to stay six to eight feet out away from the basket until they are certain where the rebound is going and to resist any pressure from the outside which tends to push them closer under the basket. After they are sure where the rebound is going it must fall in one of the areas for which each rebound man is responsible, as illustrated in Diagram 4.



Each man is responsible for an area equal to 60° from the face of the backboard, with the guards responsible for the area behind the board in addition to their regular area. Each man is depended upon by his team mates to come out with the ball and thus they are free to think of the fast break. It will be noted that the forwards play no part in this part of the defense so, as soon as the shot is taken by the offense, they are free to move into their position for the break.

The Art of Juggling

(Continued from page 24)

an inside outside pattern (or alternating the left hand, then the right hand) completes the four-ball juggle. (Illustration 12).

The attributes gained through participation in juggling include: relaxation and exercise; a sense of timing with absolute hand and eye co-ordination; mental alertness throughout the entire practice sessions; mild physical exertion which might fit in with suggestions for the physically handicapped; a gratifying sense of achievement in mastering skillfull techniques, and the

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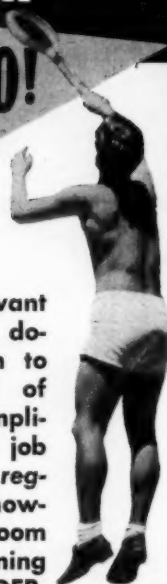
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3. Two balls
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6. Three balls
7. Three balls
8. Three balls
9. Three balls
10. Three balls
11. Three balls
12. Three balls
13. Three balls
14. Three balls
15. Three balls



Movements

in the right hand, clockwise and counterclockwise, in the left hand, clockwise and counterclockwise, in right and left hand, in parallel or straight up and down.
in Cascade or Crisscross style.
two in right and one in left hand. Right hand going clockwise or counterclockwise.
two in left and one in right hand. Left hand going clockwise or counterclockwise.
two in right and one in left hand. Right hand parallel toss.
two in left and one in right hand. Left hand parallel toss.
in reverse Cascade (each ball passing over oncoming ball).
Cascade with one under and one over.
Cascade with one over right shoulder to left hand.
Cascade with one passing under right leg to left hand.
Cascade with one passing under left leg to right hand.
Cascade with three in a row over right shoulder.
Cascade with combination of movements 9, 10, 11, 12, 13 and 14, returning to Cascade after each movement.

Training for the High Jump

(Continued from page 15)

all the different steps of the jump.

Competitive season: At this time of the track season a meet should be scheduled for the end of each week. As a result the jumper should work at full effort on Tuesdays only. The calisthenics may now be cut down. The athlete should concentrate on the fundamentals relative to clearing the bar.

MONDAY: Jog 440. Take 25-yard starts with the sprinters. Set the bar at four inches under best height and work on bar clearance funda-

mentals. Jog 440.

TUESDAY: Jog 440. Stride 150 yards on the grass. The warm-up on this day should be the same as for regular competition. Place the bar at the same height where it will start in the meet on Friday and take about six or seven jumps. Keep raising the bar until it is a little higher than your best jump and then try it several times. Jog 440.

WEDNESDAY: Jog 440. Calisthenics for ten minutes. Join the sprinters for 25-yard starts and take

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four. Set the bar at six inches below best jump and work on form, concentrating on the fundamental in which you show a weakness. Jog 440.

THURSDAY: This should be a day of easy work due to the fact that on Friday there will be a meet. Jog 440. Calisthenics. Do not do any jumping or sprinting. Some coaches do not permit their athletes to suit up.

FRIDAY: This is the day of the meet. At this time of year the jumper should know what type of warm-up is best suited to his ability. The athlete should always be careful to keep warm between jumps and to keep off his feet. Try to be relaxed at all times. The coach should spend as much time as possible with his jumpers when they are competing as this will aid their morale and give them more confidence. One of the greatest aids a coach can give his jumpers is confidence.

Late in the season it is best to watch the jumpers closely for staleness which is usually indicated by lack of interest. At this time it is wise to cut down on their jumping. In fact we did not permit Razzetto to jump at full effort at any time during the week except on the day of competition. During the last three weeks of the season he spent most of his time concentrating on bar clearance at moderate heights and with the sprinters for short dashes.

The pictures will show that Razzetto has no shoe on his right foot. That is a characteristic which is very popular out here on the coast with all jumpers. They all like it and it seems to help them get the timing of the extra kick over the bar.

We usually do not use shoes with heel spikes. We suggest the ordinary running shoe with spikes on the front part of the shoe. We do insist that all jumpers use sponge rubber in the heel of the shoe from the first day of practice on throughout the season. This will prevent heel bruises. If a jumper complains of shin splints we do not permit him to jump until it is cured. We keep him off the track and make him keep his legs in shape by jogging, walking and striding on the grass.

Razzetto's version of the stomach-roll form of the Western roll style of jumping is suitable to his unusual lack of height. He had to master it in order to gain the two extra inches. He mastered it at the end of the fall season during his second year of jumping. The timing of the kick and straightening of the left leg on top of the bar were the secrets of his success.

The Coach's Future

(Continued from page 30)

10. As teachers, 77.27 per cent of the coaches are rated on a par with other faculty members; 10.60 per cent are rated superior; and 12.12 per cent are rated inferior to other members of the faculty (as reported by principals.)

11. Slightly more than one-fourth of the head football coaches are not certified to teach physical education.

Conclusions and Recommendations

1. In order to increase the attraction of coaching as a life-time job, athletics and athletic coaching must be placed upon a higher professional basis and coaches themselves must assume a professional attitude and a sound educational philosophy. It is the duty of educators to "sell" the athletic program to school patrons and emphasize the higher educational values inherent in athletics. The public must come to know that the purpose of an athletic program is primarily educational, and must not be used to advertise the town, or satisfy community pride.

2. Coaches, themselves, do much to create insecure tenure by persisting in the belief that victory is essential. The result of defeat upon his peace of mind is equally detrimental whether "pressure" to win exists or not. If a coach does a thorough job, as he is expected to do, he will be able to maintain a winning average and peace of mind.

3. Coaches should make a stronger effort to do a good teaching job. The fact that 77.27 per cent of the coaches were rated only on a par with other members of the faculty does not speak well for the coaches as teachers. The coach must realize that he is, primarily, a teacher. He is valuable to his school only as his teaching is valuable and worth while. Since he usually commands a position of respect and admiration above that of other members of the faculty, his opportunities for doing a better than average teaching performance are enhanced. The coach, apparently, is not using his position and influence to the advantage of his teaching in the classroom.

4. Coaches should avoid organized support of their program through such agencies as "Booster Clubs". These groups are usually composed of some alumni, former athletes of the school, business men, professional gamblers, and "curbstone coaches". Historically viewed, they are remnants of the un-

desirables who dominated athletics in the early stages of scholastic development. They are a further threat if the control of athletics is taken away from the school and placed in their hands. School sports which are not under the direct supervision of school officials are detrimental to education.

5. Most head football coaches in high schools are also head coach in at least one other sport and in many cases in three other sports. If at all possible, the head coaching responsibility should be divided until the head football coach is head coach in only that one sport, while possibly assisting in other sports. This would tend to relieve the football coach of some burdens and would help insure that he would do a good job in his sport.

6. Departments of Education should demand that anyone who serves as coach in any sport should be certified to teach physical education. This qualification would require the coach to have a basic knowledge of anatomy, physiology, and the control and care of injuries. Too many times boys are placed under the guidance of coaches who have never participated in sports and have had no training in coaching. This tends to break down the professional standing of coaches and endanger the health and safety of the athletes.

7. It would be desirable for the head football coach to do his teaching in an academic subject. Too often boys develop the idea that only sports are important in school and consequently neglect their studies. The presence of the coach in a classroom, earnestly and sincerely doing a good teaching job would help to impress upon the young people that athletic interest and ability and interest and ability in academics go hand in hand.

8. The coach should make every reasonable effort to win his games, since winning games is the chief professional reason advanced by principals for coaches changing positions. Any coach who does not make a sincere endeavor to win is not only jeopardizing his own tenure, but is being unfair to the boys under his guidance who have a right to expect the coach to do his best.

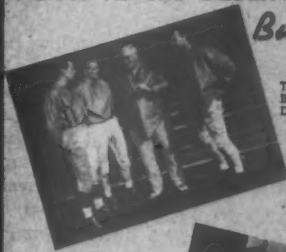
9. The average time spent on one coaching job is less than five years. This fact is causing the coaching profession to gain the reputation of a "tramp profession". The coach should make every effort to locate himself early where he feels his abilities and desires are best suited, and then to lend himself sincerely to the task of doing a good piece of work.

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The Theory and Practice of Fencing, by Julio Martinez Castello. Published by Charles Scribner's Sons, New York, London. Two hundred seventy-two pages. \$3.00.

Mr. Castello, who was coach of the American Olympic Fencing team in 1924, gives us a first book on fencing written completely in English. Mr. Anthony J. Biddle says in his introduction to the book: "Even the beginner can easily follow the exercises, coupled as they are with detailed explanations of the movements described, while the advanced student can check up on the minor details which he may never before have perfectly understood."

The book covers the three fundamental types of fencing: foil, sabre, and duelling sword. Each one is fully examined as to fundamental positions, preliminary actions, attacks, parries and returns and the various variations of attack.

The Story of Basketball in Text and Pictures, by Lamont Buchanan. Published by Stephen-Paul Publishers, New York. One hundred eighty-eight pages. \$3.50.

This is an extremely interesting

account of the history of basketball. The origin and beginnings of the game are traced and a full account of the development of the game is made through text and illustrations. There are many action pictures of all the famous players and teams as well as many pictures of the outstanding coaches. The book is more a pictorial account of the American-invented game than a textual account. Statistics on championship teams and players are also included.

Adolescent Problems, by William S. Sadler, M.D., F.A.P.A. Published by the C. V. Mosby Company, St. Louis. Four hundred sixty-six pages. \$4.75.

This book is a companion volume to *A Doctor Talks to Teen-Agers* by the same author. Both books were written to discuss the period of transition between childhood and adulthood as "this period proves to be a more or less trying experience." The earlier volume was addressed to the adolescents themselves while this book is, according to the subtitle, *A Handbook for Physicians, Parents and Teachers*.

The book is divided into six sections, as follows: Part I. Psychological and Emotional Life. Part II. Home and Family Life. Part III. Education and Schools. Part IV. Social and Economic Adjustments. Part V. Sex Problems and Moral Adjustments. Part VI. Abnormalities of Adolescence.

Progressive and Fundamental Football, by Harold C. Ave and F. A. Beu. Published by School-Aid Company, 22 Chester Avenue, Danville, Illinois. One hundred twenty-four pages. \$2.00.

Mr. Ave is football coach and Mr. Beu is president at Western Illinois State College, Macomb, Illinois. The book has been written with the teaching angle in mind and answers the demand for a text book in coaching courses. The fourteen chapters cover such topics as planning and preparing for the football season; blocking; tackling; use of the hands; line play; end play; backfield play; pass defense; team defense; modern formations and plays; signal systems; and game tactics.

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Offensive Baseball

(Continued from page 10)

the eighth or final inning when he has not been hit or has been hit lightly up until that time? Do men on bases cramp his style? What is his favorite pitch? (Hitting this ball may upset him.) Is he using a wide curve because your team mates are too anxious to hit?

Batters must realize that pitchers do the following: 1. Pitch to the batter's weakness. 2. Note his stance in the box. 3. Note his place in batting order. 4. Note what kind of hitter the batter is in the pinches. 5. Note how fast the batter is afoot. 6. Try harder than the batter and have the help of the catcher in trying to get the batter out.

H. S. DeGROAT served as a specialist in physical education during the war. He organized the army swimming program at the Officer's Training School, Miami Beach, Florida in 1942 and the conditioning program for the AAF at Atlantic City the same year. He is in his 35th year in physical education and has two sons also in coaching.

Let us note that a .300 hitter actually has two strikes on him every time he steps up to bat because his average production is one hit in three times at bat. When he draws a walk, hits into an error or accomplishes any other offensive success as listed in the previous chart, he displays himself as a dangerous batter.

One baseball headache is the batting slump that hits the men in the regular batting order. Coaches have all sorts of routines to correct this ailment. Walking into the ball is one; taking a spraddle stance in the box and swinging without stepping is another. Swinging when the pitcher is in the hole is used by many. Pulling a man out of the batting order may restore his confidence. Study his record to see if he is hitting the ball but not hitting safely, striking out or drawing some walks, etc. Perhaps he would like to move down in the batting order for a few games where he may think there is less pressure.

Lead-Off Hitting

A study of lead-off hitting was made in 1936 along with the study of dependable batting. This study revealed that the lead-off batter steps up to bat twice as many times as most of the other batters in the lineup. The accompanying chart deserves careful study. Smith was kept as lead-off hitter. The number 2 batter,



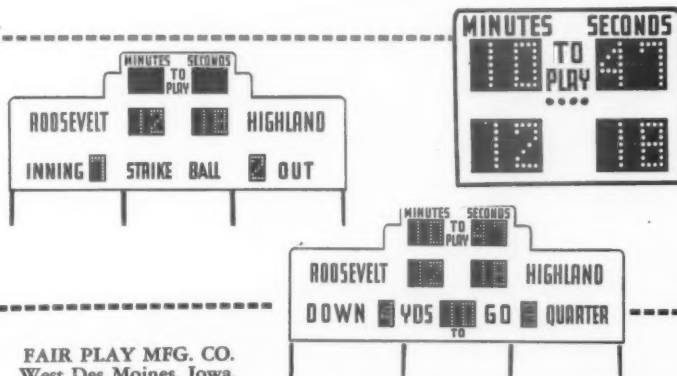
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LEAD-OFF HITTING

Table No. 2

No. in Line-up	Player	Innings Played	Times Successful	Ave.	Hits	Walks	H.E.	H.P.
1	Smith	141	11 out of 25	.444	7	0	3	1
7	Keith	112	7 out of 11	.637	5	1	1	0
5	Allen	131	7 out of 12	.583	1	3	3	0
2	Nuttall	127	8 out of 16	.500	7	1	0	0
3	Huston	135	7 out of 14	.500	4	3	0	0
4	Cella	122	5 out of 15	.333	5	0	0	0

H.E.—hit into an error.

H.P.—hit by pitcher

Further information regarding these men

- 1 Smith was successful 8 out of 10 times in last seven games.
- 1 Smith had a good record as lead-off man in previous season.
- 1 Smith was successful 3 out of 9 times during first six games.
- 7 Keith was successful 5 out of 7 times during first six games.
- 2 Nuttall was successful 5 out of 8 times during first six games.
- 3 Huston was successful 6 out of 6 times during first six games.

RUNS SCORED, RUNS BATTED IN, WALKS,

				AB,	Bat.
					Ave.
1	Smith	15	14	6	.242
7	Keith	9	12	4	.321
5	Allen	14	24*	2	.328
2	Nuttall	14	5	5	.277
3	Huston	19*	9	13*	.291
4	Cella	15	19	4	.458*

*Leader.

Nuttall, was quite successful as a hit-and-run hitter. The number 7 batter, Keith, was successful as a hitter of the first pitch and was not patient enough to bat first. Allen, Cella, and Huston were hard hitters.

Douglas lists the qualifications of the lead-off hitter, meaning the number-one man in the batting order or the number-one man in the next inning. He must be fast afoot, an expert diagnostician, crafty, good on signals and a fair hitter. But only one player in five hundred has all of these qualifications. Some lack confidence and cannot wait out the pitcher. Douglas advises the lead-off hitter: 1. Never go up there breathless from running the bases. 2. Note the position of the defensive players. 3. Have determination. 4. Break through the defense's "Get the first batter" attitude. 5. Get on first some way — hit the first pitch occasional-

ly; bunt if the defense is too relaxed or if the pitcher has not been hit; wait the pitcher out.

These things should be known by every man on the team because every batter comes up as a lead-off hitter some time. The coach needs the best performer in this lead-off position because he comes up there more often than the others.

First on Base

Next to the lead-off batter is the potential rally starter or the batter that can get on base after the first or lead-off batter of that inning has been eliminated by the defense's "get the first hitter" strategy, or even after the first two batters have been retired. It is interesting to compare the chart below with the other one and note the number of times the various batters did manage to do this.

FIRST TO GET ON BASE

Table No. 3

Batter	Times First on Base	Times A.B.	Hits	How It Was Done H.E.	Walk	H.P.
1 Smith	16	70	9	3	3	1
2 Nuttall	15	65	12	0	3	0
4 Cella	13	59	10	1	2	0
5 Allen	12	61	7	4	1	0
3 Huston	12	55	7	0	5	0
7 Keith	10	52	7	2	1	0

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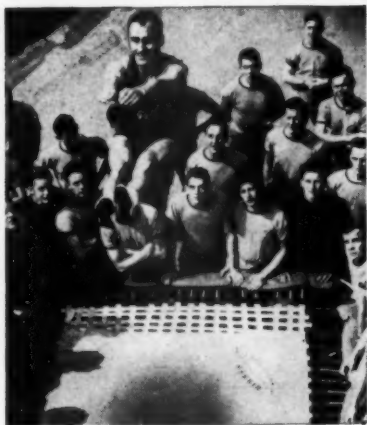
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Smith, with a total of sixteen for the total season, got on eleven times as lead-off hitter and five more times as a rally starter. Cella started rallies eight times out of his total of thirteen, being successful as lead-off hitter only five times.

A batter must consider the following: Is the pitcher and the defense likely to let up slightly if there is one or two out? How does this relate itself to the batter's chances of getting on? If a player is batting in the lower end of the batting order is there a chance that the defense will be as tense in the early innings when he comes to bat? The crafty batter should consider these things.

The Clean-Up Batter

Just like the number-one batter, the clean-up man seems to come up at the opportune time. He seems to be there when the defense wishes it was the tail-end batter. He needs to be a harder hitter, good in the pinches, expert at diagnosing the pitcher, cool and calculating and fast

afoot. The Casey style of hitter is not good here. Again we note that every batter in the line-up often finds himself batting fourth and with men on the bases.

The Pinch Hitter

Our major league managers use the pinch hitter extensively. College coaches use him at the psychological moment or to give a man on the bench a chance to get into the game. Generally the insertion of the pinch hitter causes some tension in the game. Douglas has ten suggestions for the pinch hitter. 1. Be patient — be in no hurry to get it over with. 2. Wait for a good ball. 3. Be confident. 4. Watch the moves of the infielders. 5. Be expert in your diagnosis of the situation and the pitcher. 6. Study the pitcher while on the bench and be ready. 7. Be a fine judge of the pitched ball. 8. Be keen to pull the unexpected. 9. Beat out your hit. 10. Be willing to get on by a walk or hit. Do not be a Casey.

(To be continued in the March issue.)

Hits Instead of Outs

(Continued from page 13)

conducts laboratory courses in teaching persons to recognize objects and animals in fractions of time as brief as 1/1000 of a second by flashing them on a motion picture screen. At the start the pictures are meaningless blurs, but with training and practice, persons have been taught to identify distant airplanes in 1/1000 of a second. This does not mean that they merely identify the object as an airplane; they identify it as a Japanese fighter model XX or a German Bomber model YY. Although I do not believe that it has yet been tried, there is no reason why the same methods could not be applied to teaching baseball players to judge the speed, direction, height, and spin of a pitched baseball so that a batter could learn to recognize before a pitched ball had traveled twenty feet whether it was a fast ball, a curve, or a knuckle ball.

The best way to develop and sharpen a batter's sense of timing is to let him practice batting against the sort of fast ball and curve pitching that he has to face in a regular game.

(4) The *CUT* is the swing of the bat as it moves toward the ball. Cut is used to indicate a short, flat swing, rather than the wide, full, circular swing. Swinging too hard and in too full an arc is a form of bad timing

that probably results in more outs than any other one cause in baseball, for the full shoulder-swing means more missed balls and more improperly hit balls.

The batter should not try to *kill the ball*. He should not strain or press but should take an easy cut at the ball, moving the bat straight through on the same level at which he intends to hit the pitch. He should not chop at the ball or swing up at it. Generally, the hitting end of his bat should move in an arc of from one to three feet. He should swing straight and level with his wrists and the impetus of his body as he steps forward.

The batter should try to meet the ball at the top of his swing. Instead of trying to pull the hit, he should let part of the force of his drive come from the ball rebounding from the center of the fat part of the bat. It is the rebound and the wrist snap at the instant that the bat meets the ball that gets distance into line drives.

Too many hitters try to "murder" the ball with sheer shoulder-power. They miss the ball completely or hit high flies or ground balls that are fielded easily.

In proper batting technique there should be no strain at all on the shoulder muscles. Instead of a full

shoulder-swing, the dangerous line-drive hitter takes a short, flat cut at the ball. In the full shoulder-swing the bat covers half, three-quarters, or sometimes a complete circle. With the controlled wrist cut, the bat covers only one-quarter of a circle or less. The flat cut, therefore, gives the hitter two or three times more time to judge the speed and flight of the approaching ball and increases his accuracy proportionally.

The controlled wrist-hitter can place his hits. He does not tend to pull all the balls he hits in the same direction. He can learn to hit to any field, and his opponents cannot play a set defense against him. When the unbalanced shoulder-swinger connects, the opposing fielders know where the ball is going. That is one of the reasons that the most beautiful of all plays in baseball, the hit-and-run play, does not succeed more often. The shoulder-swinger cannot hit behind the runner. This is also why the double-play occurs so frequently. Pitchers know just how to pitch to the shoulder-swinger to make him hit to the shortstop or second-baseman.

The best hitters learn to step into and cut at the ball simultaneously. As they swing, the bat is angled backward in their hands; then, just as bat starts over the plate to meet the ball, they straighten the bat out with their wrists and tighten their hold on the bat. This rhythmical wrist action, with their keen sense of timing, is what makes Ted Williams and Joe DiMaggio such effective hitters.

Last year in spring training camp, Williams made the following statement to a sports reporter: "Joe DiMaggio won't hit a bad pitch, and neither will I. I guess we're both called wrist hitters. Joe is better than I because he never gets excited, never worries. He takes the shortest swing I ever saw for a power hitter and gets distance to any field."

The smart coach will not insist on his hitters slugging for distance. Rather he will instruct them to forget distance and concentrate on hitting the ball with exactly the center of the fat part of the bat a few inches from the end. Hitting solid line-drives away from the fielders is far more important than hitting for distance.

Although he will be told to forget distance, the properly trained wrist-hitting batter will discover that generally he is getting as much distance as the grunting, shoulder-straining slugger. This is because the perfectly-timed short, flat cut takes full advantage of the speed of the approach-

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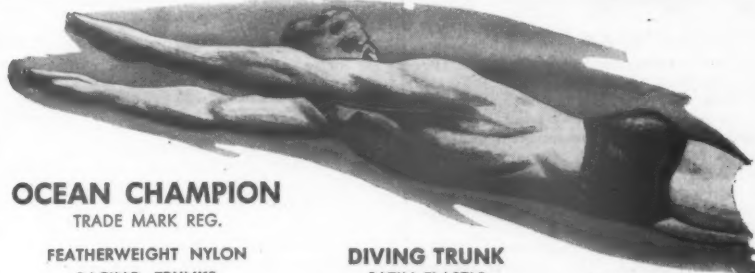
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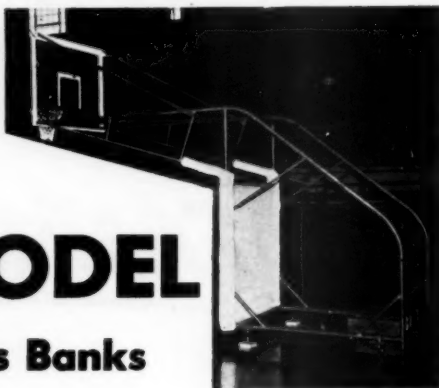
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ing ball and converts it into energy travelling in the opposite direction.

For indoor batting practice, each player should be given a bat and lined up with plenty of swinging room, and directed to cut in rhythm at an imaginary baseball. This should be continued until they have the closed stance, the forward step, and the short, flat cut perfected. For outdoor practice, the coach should stand behind the batting cage and correct mistakes until he gets the perfection he desires.

Bunting Technique

Now, a word about bunting. The bunter should take exactly the same stance as if he were hitting away, and should hold the bat the same way. However, instead of swinging at the ball as he steps forward, he should slide his right hand (if he is a right-handed hitter) to within three or four inches of the large end of the bat and pinch the side of bat toward the catcher with the thumb and forefinger of his right hand. The thumb and forefinger hold the big end of the bat off center and behind so that the fingers cannot be damaged by a misjudged ball. The batter's left hand grips the handle in the usual manner.

Both wrists should be relaxed so they will give with the pitch and not push the ball too swiftly toward an infielder. The ball should be allowed to hit the bat between the two points at which it is being held. An effort should be made to bunt the ball into the ground. The direction of the bunt is controlled by moving the left hand backward or forward at the instant of contact. The thumb and forefinger at the far end of the bat act as a pivot or hinge on which the bat is swung by the left hand. If the left hand is moved toward the pitcher, the bunt is directed toward the first-base side of the diamond. If the left hand swings back toward the catcher, the bunt is steered toward third base. (Just the reverse for a left-handed batter.) The loose wrists and the pivoting of the bat make control of direction and speed of the bunt surprisingly accurate.

The bunted ball must not be pushed but allowed to hit the bat and rebound. Since an unexpected slow bunt, properly placed, is very difficult to field fast enough for an out, correct bunting technique changes questionable sacrifices and double-play balls into infield hits. Aside from giving up a walk, few things upset an opposing pitcher more than a perfect bunt.

Bunting technique may be practiced both indoors and out. The

"pepper game" is ideal for perfecting bunting technique, for sharpening timing, and for helping to get players in condition.

If baseball coaches will teach their players the proper stance and the short, flat cut, encourage them to improve their sense of timing, and develop their poise by intelligent direction and practice, they will be pleasantly surprised to discover that "the poor material" with which they started has developed a real offense, an enthusiasm, and a team spirit that will win ball games.

Conditioning for Baseball

(Continued from page 6)

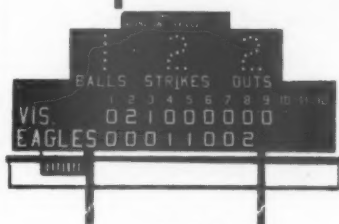
then gradually increase the distance and the speed. A player should take lots of time to get warmed up and to accustom the arm muscles to the motion of throwing before throwing the required distance and speed.

During early baseball training the weather is usually quite changeable and teams in the northern part of the country have to work out in buildings in which the temperature is often not properly regulated. Hence extra care should be given to arms and legs. They should be massaged before each practice with warm liniment to stimulate circulation and keep them warm during the practice. Pitchers and catchers should have their arms, backs and chests massaged well with warm liniment before each practice as they usually do more throwing than the other candidates. The use of tannic acid compound to toughen the hands will prevent a lot of sore hands and blisters on the finger ends and thin sponge rubber inside the gloves, especially for catchers, will prevent early season bruises in the hand. It is only natural that the catching hand should have this added protection at the start of the season.

Use Good Equipment

The uniforms or suits should be the best that your budget can afford and should consist of shirt, pants, shoes, cap, wool undershirt, sliding pads and inner and outer socks. Wool undershirts are necessary for all the candidates as they keep the body warm, prevent colds and help to conserve the body heat. Care should be taken in getting shoes of the right style and size. They should fit comfortably so as not to cause blisters. Good feet are essential to all athletes. Have the candidates paint their feet before and after

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each practice with tannic acid compound to toughen the skin. When the compound has dried, the feet should be dusted with any good foot powder. The players should wear two pairs of thin white cotton socks instead of one thick pair. The two pair will act similar to sliding pads and help eliminate blisters. Thick wool socks make the feet sweat too much and keep them soft. In any sport we are striving to get the feet tough without developing blisters or soft spots. By using tannic acid, powder, white cotton socks and some foot spray outside the shower-room door, we can eliminate a lot of athletic foot trouble. Good warm sweat-coats must be worn after a workout, especially if the players have to stand around in between their workouts. They should also be worn when going from the locker-room to the building or field to practice. Wind breakers are essential for all candidates, but more so for battery candidates and especially when they are working-out in cold buildings or outdoors on cold windy days. Sliding pads should be worn from the first day to get the candidates used to wearing them. They should be long enough to protect the outside of the leg and hip from the waist to the knee and wide enough to cover the whole hip and outside of the leg. If sliding pads are not available, an ordinary bath towel folded double and fastened to the inside of the waist of the pants makes a good substitute.

As in all sports, diet and correct eating habits enter into the conditioning for baseball. Attention must be given to eating at the proper time. No meal should be eaten for at least three hours before a practice session or game. Some athletes must allow more than three hours. Nothing should be eaten between meals. The best policy for an athlete to follow is to eat three times a day — a good regular breakfast, a light lunch, with the evening meal, after a workout or game, being the largest meal. Breakfast should consist of fresh fruit or fruit juice, cereal (cooked or prepared), eggs, dry toast, butter and a beverage such as milk, tea or coffee. Lunch should consist of fruit or vegetable salad, cold roast beef, chicken, fish, baked potato, toast, whole wheat or bran bread and dessert (such as ice cream, custard, etc.), one cup of tea, one glass of water. Large quantities of liquids should be avoided. Dinner should consist of soup, fruit or vegetable salad, roast beef, steak, lamb chops, chicken or fish, potatoes (mashed,

baked or escalloped), vegetable, bread (graham, bran or whole wheat) dessert, tea, cocoa or milk. The athletes should avoid eating greasy foods such as fat pork. They should also avoid pie, cake, too much sugar, and eating between meals.

Common Injuries in Baseball

One common ailment is a sore arm, usually caused by throwing too hard before the arm is in good condition. Whirlpool bath treatments of 20 minutes each twice a day, followed by a good massage and rest is one of the best cures for sore arms. It has often been said that you can pitch a sore arm into condition again, but I have not seen any injury cured by aggravating it.

Another injury is the pulled muscle or charleyhorse. Ice packs or cold applications should be applied for 30 minutes to retard the swelling. It should then be taped. Hot applications should be applied overnight. The next day two 20-minute diathermy treatments should be given. Continue the treatments and hot applications until healed. In a great many cases the taping must be continued for quite a long while after the injury has healed to prevent a recurrence of the injury.

A bruised muscle is a third injury. Ice packs or cold applications should be applied for 30 minutes and then hot applications applied overnight. The next day two 20-minute whirlpool or moist-heat treatments should be given. The treatments and hot applications should be continued until the muscle is healed.

Strawberries or sliding burns are common injuries in baseball. The wounds should be cleaned with alcohol and a thin coat of sulfathiazole covered with a sterile dressing should be applied. This should be repeated daily until the burns are cured.

Building Athletic Turf

(Continued from page 41)

if the work is carefully scheduled. Perhaps a field is hollow in the center or entirely flat, the grass is thin and poor in color, the soil is hard and the rain does not go in or it gets muddy in heavy rains, and there are too many weeds. A local authority should be contracted to do the things that have been advised for the big complete job. To cure the flat or hollow field, good soil must be brought in, not any soil. Have the local expert make the same soil test of the new

BLEACHER AND STADIUM MATERIALS



will remain scarce during 1949 and it is apparent that demand will continue to exceed supply for at least another year.

We urge you to anticipate your 1949 requirements and place your orders immediately so that you may assure yourself of delivery as desired.

We offer, without obligation, the advice and suggestions of our engineering department as well as business experience gained through more than 50 years service to our customers.

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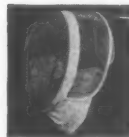
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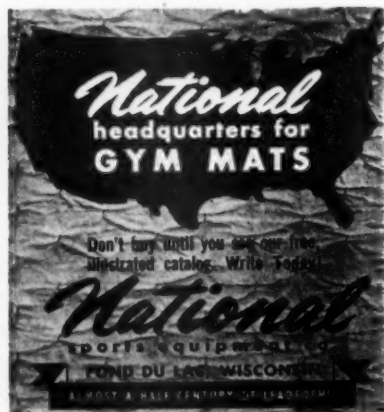
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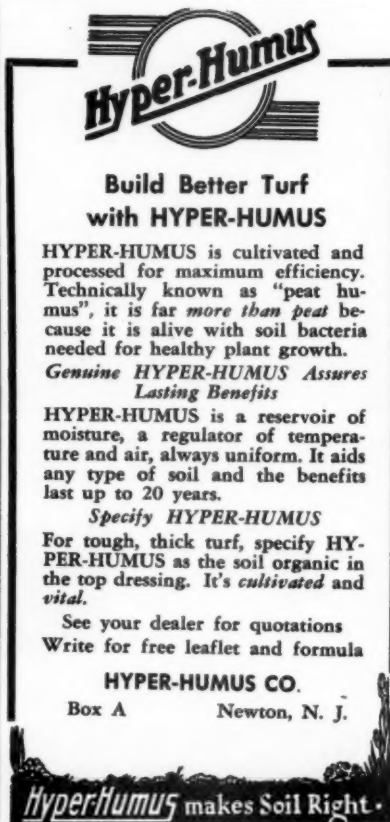
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soil to be brought in that he makes of the existing field soil. Before the new soil is brought in a good aerator or spiker should be placed on the field, the kind that will get down at least three inches deep and make a hole one half to three quarters of an inch in diameter. These penetrations should be made not more than two to three inches apart. This will do a number of things: it will aid the synthesis of the new and old soil; it will aerate the soil; it will aid water penetration, and it will break up the hard top crust. The entire area should now be hoed at least two inches deep. This should be done in four to six directions until the soil is chopped fine. Now the new soil should be applied and the fertilizer and ground limestone added as needed. This should all be raked fine. It is now ready for finished seeding. The organic soil content must not be less than 10% by volume and it is better if it is 15%. This is the most costly item but is worth every cent invested. The right kind of organic material is vital.

The type of seed to be used depends upon the usage to be made of the field. The drainage element cannot be included here as it was in building or rebuilding a new field. If there is some extra money available the existing soil may be removed, the drainage material laid and the soil replaced. Cinder drainage, however, must always have from four to six inches of soil on top of it so that it cannot work up through the soil and injure the players. The care and maintenance of the field also need considerable attention, more so here than in the most costly job.

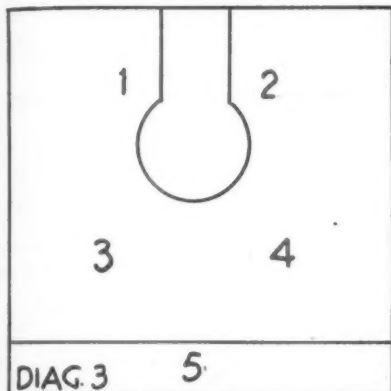
The correct way to cut grass is important. A sharp mower should be used so as not to tear the roots or the top or make the grass bleed. The grass should be cut high (about 6") for at least two months after the new seeding has germinated. Following this it should be cut down to three inches, (or a little shorter, just before a competition game.) The reasons for cutting high are: 1. The higher the cut (within reason) the deeper the roots, and consequently, the stronger the roots. Good roots are what make a good field. 2. The higher the cut the less weeds there are both new and established. 3. The higher the cut the more shade the tops will give to hold moisture in the soil and reduce its excess losses. 4. The higher the cut the less effect cleats will have on it and the more resilient the turf will be. Good turf is neither difficult nor expensive to develop.

Combination Defenses

(Continued from page 34)

We next teach the boys the zone-rush. This gives them a defense all over the floor and we find many B teams become excited when they are rushed in their back court.

For the next step we teach the regular man for man. By this time we hope to have an offense to use in practice that will make the defense play correctly or be screened off. At this stage we spend considerable time on drills and on sliding through screens. The man-for-man rush may be taught at this time also.



We teach the press-out defenses last. Since we take more chances near our defensive goal in the press-out, the boys must have mastered all their defensive fundamentals. They must have learned to recover rapidly and to cover temporarily for each other.

When we feel that our team knows all our defenses well we start mixing them up and changing from one to the other in practice. At first we change by calling the defense that we wish to play by name. In a game we make the shift at a quarter or time out. When the boys are able to make this type of adjustment without becoming confused, we start making the changes automatically according to the play situation at a particular time.

Automatic changing of defenses takes fast thinking on the part of the boys but is very confusing to the offense. The boys like it and we feel that it has helped us win a few ball games.

From Here and There

(Continued from page 4)

"Ollie" De Victor, veteran trainer at Missouri, has trained teams for seven bowl games and never had a winner. Twice he went to the Rose Bowl with Pittsburgh and again with

From Gym Play
to...

GARDEN GAME

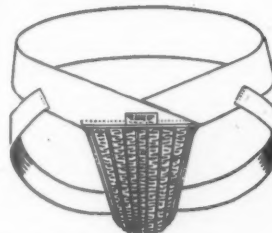
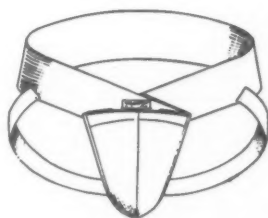
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NEW ITEMS

IN EQUIPMENT AND IDEAS



THE LATEST addition in fencing equipment is a fencing mask whose heavy steel mesh covering, used in protecting the face, is finished with chrome plating. This plating helps to make the mask more permanently rust-resistant. To reduce the amount of glare, the inside of the mask is coated with a dull black finish which allows the fencer to compete without any undue eye strain. The mask is now being produced by the Castello Fencing Company, Incorporated, 232 East 9th Street, New York, N. Y.

A Bike Web innovation, the No. 65 knee cap support, has recently been introduced. It is recommended for use in basketball, football and similar sports, for the prevention and protection of "trick knees" from unusual impacts and strains. A sponge rubber pad is enclosed between layers of cotton-elastic webbing which has a two-way stretch to flex with the knee and prevent "creeping". A porous weave assures cooler and more comfortable protection. It is tapered to follow the natural leg contour.



TO SATISFY the demand of youngsters for golf clubs they can actually use, the Hillerich and Bradsby Company of Louisville, Kentucky, has added a Junior Outfit to its line of Grand Slam Clubs. This outfit is not to be confused with "toy" golf clubs as it is of highest quality and design and the clubs differ from regular Grand Slam clubs only in size. The set consists of one wood club, three iron clubs and a Junior golf bag of exceptionally fine quality.

A DEVICE which appeals to grade-school youngsters is the new Voit BTI batting tee. The batter simply sets a softball atop the soft rubber tip of the tee, takes aim, swings, and the ball is in play. This allows more hitting, fielding and baserunning in any play period and eliminates the waste of time youngsters lose trying to get the ball over the plate. If the batter misses, the flexible rubber neck absorbs the shock. The tee is manufactured by the Voit Rubber Corporation.



THIS TRACK shoe, the latest model to be placed on the market, has been in the development stage for several years. The four main spikes are placed under the ball of the foot at the point of greatest contact to give better traction and better balance. This new feature was prompted after consulting with track coaches and athletes and studying several makes of foreign shoes. They may be ordered direct from the Chic Werner Athletic Shoe Company, 4013 Sixth Avenue, Altoona, Pennsylvania. Price: \$12.50.

THIS NEW protective device will enable athletes who wear glasses to play basketball, baseball, handball or squash without danger of breaking their glasses. Called the MonoGoggle it is made by Willson Products, Incorporated, Reading, Pennsylvania, manufacturers of sun glasses and industrial safety equipment. It is a one-piece plastic lens that gives the player clear and unobstructed vision while providing complete safety. Lightweight frames are available in clear acetate or mottled brown Polythene which retains its flexibility under extremes of temperature.



Penn State and then with Missouri to the Orange, Sugar, Cotton and Gator Bowls. . . . Back in 1921 the little University of New Hampshire downed mighty Army 10 to 7 on a field goal by "Dutch" Connor. The hero of the game is coaching at Athol, Massachusetts, High School.

EV SHELTON, coaching his twenty-fifth year of basketball in which, incidentally, he has won 19 championships, is employing the "two platoon" system. Unlike Army's system, Wyoming's is all offensive. One unit is a fast-break outfit, and the other a slow-break ball control quintet. . . . If athletic names mean anything, Jim Whatley has two great centers on his Ole Miss hardwood squad. Ken Terry is the son of Memphis Bill of New York Giant fame, while Don Blanchard is a cousin of Army's famed Mr. Inside, Doc Blanchard. . . . In the Southeastern Conference, 1054 football games have been played since the founding of the conference and only 62 have ended as ties. . . . Coach Frank Keaney of Rhode Island State College has recently designed a new basketball shoe. This popular shoe is being manufactured by the Bristol Manufacturing Company of Bristol, Rhode Island. J. B. Greer, the newly-appointed sales manager, will display this new shoe at the Sporting Goods Convention and other conventions and clinics.

NORWICH Military College, a mens' school, has signed Mrs. Burt Potter, well known skier as its new ski coach. . . . The city of Dallas, Texas, has recently passed a city ordinance which makes drinking at high school athletic contests and other high school events a misdemeanor punishable by fine not to exceed two hundred dollars. . . . Emmett Strickland, whose West High School of Nashville won the Tennessee basketball championships in 1944, 1946 and again last year, has retired from coaching to become principal of Waverly-Belmont Junior High School in that city. . . . The students at Piedmont, California, High School recently paid for the installation of floodlights on their field, Witter Field.

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Volley Ball—Striking Bag
(except rubber)

E. J. CLARKE

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Price List Upon Request

News from the Meetings

(Continued from page 20)

problems confronting school and college athletics.

Let the Buyer Beware

FORTUNATELY, the old saying, "let the buyer beware" is not as prevalent today as it was a few years back. In the first place, the concept of business has changed so that today it is built upon the principle of repeat business rather than a one-shot killing. Without repeat business there can be little hope of a business existing for very long. Secondly, the power of advertising has built up reputations for various brands and concerns. Like a winning streak, these reputations are zealously protected lest these be shattered by a faulty product. In the third place, all reputable magazines protect their readers by refusing to carry the advertising of concerns that misrepresent their products in their advertising.

Numerous coaches have attempted to stretch the school budget by buying with price the only prerequisite. Later they have unwittingly found themselves in a comprising situation when it is necessary to request the school board for additional funds the following year due to utter uselessness of last year's purchase.

National Sportsmanship Assn.

THERE recently has been formed a most commendable organization to foster and promote sportsmanship. The National Sportsmanship Association will gather together outstanding examples of good sportsmanship both in the past and the future. They will also make a national award for the outstanding example of sportsmanship exhibited each year. Through the wide publicity which will result from this award, a greater emphasis will be placed upon this important aspect of school and college athletics. For further information on this worthwhile endeavor contact E. P. Coleman, Phoenix College, Phoenix, Arizona.

COACHES READY REFERENCE SERVICE COUPON

FEBRUARY, 1949

As a service to our readers and for their convenience we list here the advertisers appearing in this issue. Many of the concerns offer free booklets and coaching aids. Simply cut along the perforated rule and mail to:

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SAV-A-PITCH*
Pitcher's Plate

STAYS NEW 4 TIMES AS LONG!

Designed by a pitcher, this is the *first basic improvement* in pitcher's plates! . . . SEAMLESS "SAV-A-PITCH" Plate assures a firm stance for perfect control—*firmer than the ground itself!*

No wood or spikes are necessary. You simply fill the hollow center with sand, dirt or concrete and set the plate in position . . . "SAV-A-PITCH" is actually *four plates in one*—with all 8 corners and 12 edges reinforced. When one surface and edge are worn, the plate is turned to a new position. Official dimensions—24" x 6" x 6" . . . Made by the makers of the world-famous "SAV-A-LEG" Home Plate.



SAV-A-LEG Home Plate

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...in any "flat" period and eliminates the waste of time youngsters lose trying to get the ball over the plate. If the batter misses, the flexible rubber neck absorbs the shock. The tee is manufactured by the Voit Rubber Corporation.



THIS TRACK shoe, the latest model to be placed on the market, has been in the development stage for several years. The four main spikes are placed under the ball of the foot at the point of greatest contact to give better traction and better balance. This new feature was prompted after consulting with track coaches and athletes and studying several makes of foreign shoes. They may be ordered direct from the Chic Werner Athletic Shoe Company, 4013 Sixth Avenue, Altoona, Pennsylvania. Price: \$12.50.

THIS NEW protective device will enable athletes who wear glasses to play basketball, baseball, handball or squash without danger of breaking their glasses. Called the MonoGoggle it is made by Willson Products, Incorporated, Reading, Pennsylvania, manufacturers of sun glasses and industrial safety equipment. It is a one-piece plastic lens that gives the player clear and unobstructed vision while providing complete safety. Lightweight frames are available in clear acetate or mottled brown Polythene which retains its flexibility under extremes of temperature.



Burt Potter, well known skier as its new ski coach. . . . The city of Dallas, Texas, has recently passed a city ordinance which makes drinking at high school athletic contests and other high school events a misdemeanor punishable by fine not to exceed two hundred dollars. . . . Emmett Strickland, whose West High School of Nashville won the Tennessee basketball championships in 1944, 1946 and again last year, has retired from coaching to become principal of Waverly-Belmont Junior High School in that city. . . . The students at Piedmont, California, High School recently paid for the installation of floodlights on their field, Witter Field.

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